

LIST OF UPCOMING MULTILATERAL DEVELOPMENT BANK (MDB) PROJECTS  
WITH POSSIBLE ENVIRONMENTAL CONCERNS

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OFFICE OF ENVIRONMENT  
BUREAU FOR POLICY AND PROGRAM COORDINATION  
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## ABBREVIATIONS AND ACRONYMS USED

### BANKS, LENDING INSTITUTIONS AND NGOs:

ADB	Asian Development Bank
AfDB	African Development Bank
BIC	Bank Information Center
CIDA	Canadian International Development Agency
DOE	Department of Energy (USG)
EBRD	European Bank for Reconstruction and Development
EEC	European Economic Commission
EU	European Union
EXIM	Export Import Bank (USG)
EXIMBANK	Export Import Bank (Japan)
GEF	Global Environmental Facility
GTZ	German (bilateral) Technical Assistance Agency
FAO	United Nations Food and Agriculture Organization
IDB	Inter American Development Bank
IBRD	International Bank for Reconstruction and Development (WB)
IDA	International Development Association (WB)
IFC	International Finance Corporation (WB)
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
IUCN	World Conservation Union
KfW	Kreditanstalt für Wiederaufbau (German Bank for Reconstruction and Development)
MIGA	Multilateral Investment Guarantee Agency (WB)
MDB	Multilateral Development Bank
MRC	Multinationals Resource Center (an NGO)
NGO	Non-Governmental Organization
NRC	Nuclear Regulatory Commission (USG)
ODA	Overseas Development Agency (United Kingdom)
OECF	Overseas Economic Cooperation Fund (Japan)
SIDA	Swedish International Development Agency
USAID	United States Agency for International Development
USG	United States Government
WB	World Bank Group (including IBRD, IDA, IFC, and MIGA)
WWF	World Wildlife Fund

### OTHER ABBREVIATIONS:

EA	Environmental Assessment
EIA	Environmental Impact Assessment (used interchangeably with EA)
EDS	Environmental Data Sheet (WB)
GIS	Geographic Information System
Gwh	Gigawatt hours
ha	hectare(s); 1 ha = 2.47 acres, 1,000 ha (10 km <sup>2</sup> ) = 3.87 miles <sup>2</sup>
ICDP	Integrated conservation and development project
IEE	Initial Environmental Examination
km	kilometer(s); 1 km = .62 miles
kV	kilovolts
MOS	Monthly Operational Summary (World Bank)
MW	Megawatts
N/A	Not applicable
PID	Project Information Document (WB)
USED	U.S. Executive Director

**LIST OF UPCOMING MULTILATERAL DEVELOPMENT BANK (MDB) PROJECTS WITH  
POSSIBLE ENVIRONMENTAL CONCERNS**

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**MDB PROJECTS, FORMERLY REPORTED OR FOLLOWED, BY USAID THAT WERE  
APPROVED DROPPED OR PUT INTO RESERVE STATUS SINCE THE JUNE 1998  
REPORT**

<u>Country</u>	<u>MDB</u>	<u>Project Name</u>	<u>Bank Status</u>
<b>PROJECTS LOCATED IN AFRICA</b>			
1. Ethiopia	IDA	Health Sector	Approved
2. Ghana	IDA	Health Sector Support	Approved 10/97
3. Ghana	AfDB	Small-Scale Rubber Plantations	Approved
4. Kenya	AfDB	Rural Health Services Project II	Approved
5. Lesotho	IBRD	Lesotho Highlands Water Project - Phase 1-B	Approved 06/98
6. Mali	IDA	Health Sector Development	Approved
7. Niger	AfDB	Kandaji Dam Construction study	Approved
8. Niger	AfDB	Natural Resource Conservation	Approved
<b>PROJECTS LOCATED IN ASIA AND PACIFIC</b>			
9. India	IFC	Sarshatali Coal Mine <sup>n</sup>	Approved 12/98
10. Indonesia	ADB	Metro Medan Urban Development	Approved 11/97
11. Sri Lanka	IFC	Lanka Hospital Corp/Apollo Hospital	Approved
12. Vietnam	IFC	Namoi International Hospital	Approved
<b>PROJECTS LOCATED IN EUROPE AND CENTRAL ASIA</b>			
13. Armenia	EBRD	Hrasdan Unit No 5 Privatisation	Approved
14. Azerbaijan and Georgia	IFC/EBRD,	Early Oil Development	Approved 02/99
15. Georgia	EBRD	Enguri Hydropower Plant	Approved 12/98
16. Turkey	IFC	Bayindir Medical Centers	Approved
17.			
<b>PROJECTS LOCATED IN LATIN AMERICA AND THE CARIBBEAN</b>			
18. Colombia	IDB	Regional Roads Program	Approved 10/97
19. Dominican Republic	IDB	Watershed Management Program	Dropped
20. Ecuador	IDB	Cuenca-Molleturo Road	Dropped 03/99
21. El Salvador	IDB	Water and Sewer Program	Approved 05/98
22. Haiti	IDB	Organization and Rationalization of the Health Sector	Approved 08/98
23. Jamaica	IBRD	Road Infrastructure Development	Approved
24. Panama	IBRD	Second Roads Rehabilitation	Approved 09/98
25. Panama	IDB	National Rural Roads Program II	Approved 09/98
26. Panama	IDB	Electricity Expansion Program	Approved 07/98
27. Panama	IDB	Tourism Support Program	Approved 10/99
28. Paraguay	IDB	Cotton Sector Support Program	Approved 06/98
29. Paraguay	IDB	Support for Int'l Trade Negotiations	Approved 06/98

<u>Country</u>	<u>MDB</u>	<u>Project Name</u>	<u>Bank Status</u>
<b>PROJECTS LOCATED IN THE MIDDLE EAST AND NORTH AFRICA</b>			
30.	Algeria	IBRD Algiers Urban Renewal	Approved
31.	Jordan:	IBRD Amman Water & Sanitation Management	Approved 03/99

For more information on the above projects contact the USAID Bureau for Policy and Program Coordination, Office of Environment, PPC/ENV.

<sup>n</sup> = newly listed since the June 1998 report.

## EXECUTIVE SUMMARY

In accordance with section 537(h) of Public Law 100-202, this April 1999 report lists proposed multilateral development bank (MDB) projects likely to have adverse impacts on the environment, natural resources, public health or indigenous peoples. This report does not prejudge the United States Government's position on the final versions of projects when they are considered by the MDB executive boards, rather it serves as a record of USAID environmental monitoring of MDB projects. Since USAID does not have the resources to methodically analyze every MDB project, this analysis is a representative rather than comprehensive listing. Even though it is representative, given the serious consultative process to develop this list USAID has confidence in its value as a snapshot of the current state of MDB projects with environmental problems.

This year's report highlights environmental concerns with 29 MDB projects totaling approximately \$2.3 billion in proposed MDB loans. These include 10 projects in Latin American the Caribbean, 8 in Africa, 8 in Asia and the Pacific, 1 in Europe and Central Asia, and 2 in the Middle East and North Africa. Projects are listed by region in the main body of the report starting on page 19. Total project numbers sorted by lending sectors include 8 public/urban infrastructure, 6 road, 5 power/hydropower, 5 agriculture, 2 health, 2 natural resources, and 1 mining. As seen in previous years, public/urban infrastructure, power, and road projects continue to be the most environmentally problematic sectors.

Individual projects in this report with significant environmental concerns include:

- Western Africa Manantali Hydropower Development
- Chad-Cameroon Petroleum Pipeline
- Indonesia Semarang Flood Control
- Lao Nam Theun Hydropower II
- China Western Poverty Reduction
- Vietnam Mekong Delta Water Resources Development
- Bolivia Export Corridors (Santa Cruz-Puerto Suárez Road)
- Dominican Republic Power Market Development / Power Sector Hybrid Program
- Ecuador National Roads Program II
- El Salvador Critical Areas of Decontamination
- Jordan Samra First Private Power.

The report's final section analyzes the 1995-1999 reporting period, which includes 103 projects totaling almost \$9 billion in proposed MDB loans and over \$35 billion in total project costs. The significant number of MDB projects reported over the period indicates that while all MDBs have good environmental impact assessment procedures, there continues to be a steady number of proposed projects with significant potential environmental impact. USAID's interventions through this process have achieved important progress in many individually listed projects, but the relatively steady number of new problem projects over the years underscores the continuing need for independent environmental monitoring of proposed MDBs projects.



## TRENDS AND ANALYSES

### Background

USAID began general monitoring of proposed MDB projects in 1983. Over the course of the next several years it increased its review of environmental aspects of loans, which were often the most problematic. Congress expanded USAID's work in these activities through language in appropriations legislation and amendments to the International Financial Institutions Act. USAID's Bureau for Policy and Program Coordination investigates and reports on environmental concerns identified by USAID missions and interested non-governmental organizations (NGOs). USAID co-chairs the "Tuesday Group," a monthly meeting of concerned international NGOs and U.S. government (USG) agencies, to discuss environmental and social issues at the MDBs.

This report lists proposed Multilateral Development Bank (MDB) projects -- those that have not yet been approved by their respective Executive Boards. Projects are considered for inclusion in the report if a USAID Mission identifies environmental, natural resource, public health, or indigenous peoples concerns. Project entries in the report also incorporate comments from other USG agencies and NGOs, mostly through the Tuesday Group meeting mentioned above. MDB staff have also been very helpful in providing additional information and addressing issues raised on projects.

The list concentrates on the major MDBs, including the World Bank, the Asian Development Bank (ADB), the African Development Bank (AfDB), the Inter-American Development Bank (IDB), and the European Bank for Reconstruction and Development (EBRD). This report does not usually include projects in countries where USAID does not have a program (such as China, Vietnam, etc.). Also, the list is more thorough with respect to projects from the World Bank and IDB, for which early information is readily accessible. It is less complete for the AfDB, ADB, and EBRD. Early project information from these MDBs is usually inadequate for a preliminary environmental review.

The principal mechanism for compiling this report is USAID's Early Project Notification (EPN) System. In this system, USAID's Bureau for Policy and Program Coordination notifies USAID field offices, regional bureau desk officers, and selected embassies of upcoming projects as each MDB makes the information publicly available. USAID field missions respond if there is reason to anticipate environmental and other concerns, and the EPN System compiles the information. Projects are then investigated further, and placed on the list based on available information and the judgment of USAID. This report specifically notes USAID field staff comments by referring to them with USAID/country name. Brackets follow the comments with the method

of communication (cable number, fax, or e-mail) and date (for example, [e-mail: USAID/Kenya 12/4/96]).

Inclusion on the list indicates that the project could have significant environmental impacts. Proper project planning and design should anticipate these impacts. Environmental assessment of the project may lead to its redesign, selection of alternative measures, or the introduction of specific mitigative measures. Many concerns identified in the list are being addressed through the environmental assessment and project design process, and are noted. This report and more recent editions of it are available on USAID's homepage on the Internet (<http://www.info.usaid.gov/environment/pubs>). A list of MDB projects formerly monitored by USAID that were approved, dropped, or put into reserve status since the June 1998 report, appears after the Table of Contents.

USAID works with the Departments of Treasury and State, the Environmental Protection Agency and the U.S. Executive Directors' offices at the MDBs to help resolve or clarify environmental issues on selected projects. USAID also works with MDB staff and management while loans are in the design stage to resolve issues.

MDBs have made significant progress toward integrating environmental concerns into their loan criteria and sector policies in recent years. The World Bank, followed by IDB and ADB, have been leaders in improving the MDB environmental policies. Strengthened staff capacity for most MDBs, MDB policies in forestry, and World Bank policies in energy and information access have been especially important changes.

Beginning in 1989, the World Bank and regional MDBs have put in place internationally recognized standards for comprehensive environmental assessment procedures. The procedures help ensure that proposed projects are screened for possible environmental impacts, and that full environmental assessments (EAs) are conducted when impacts are likely to be significant. The EA classification systems differ by bank. A summary of each classification system follows this Introduction. In addition, all the MDBs have adopted procedures by which non-confidential project-related information is available electronically and through headquarters' and field offices (however, this information is not always provided in a timely manner). The U.S. Government was the leading advocate for this move, as it improves the process of exchange, consultation, and project performance.

The current edition of this report reflects the improvements at the MDBs. The nature of the problems has shifted since the late 1980s. This report no longer reveals a need for environmental procedures and policies, but serves as an indicator for how well these are being carried out. While the MDBs have been doing a much better job of examining and addressing environmental impacts of their projects,

USAID is still identifying a substantial number of significant issues which indicates that there is a continued need for monitoring.

**An Example of USAID's Role in Assisting an MDB Problem Project:  
Belize: Southern Highway Project (Inter-American Development Bank)**

USAID made a series of recommendations about the Belize IDB Southern Highway Project, and reported on them in last year's edition of this report. These are repeated below and followed by IDB's response made in March 1999. As road and transport sector projects continue to be environmentally and socially problematic, it is worth revisiting the issues in light of IDB's response.

USAID conducted an affirmative investigation (or fact finding mission) on the IDB-funded Belize Southern Highway Project, a \$16-million loan for upgrading 64 km of the highway's northern section. The December 1997 investigation reviewed several environmental and social concerns regarding the project, which IDB's board approved in early January 1998. Major concerns surrounded the project's potential and serious impacts on the region's biodiversity, protected areas, coastal and marine ecosystems, and social impacts on the Maya indigenous peoples and other ethnic groups.

To mitigate indirect impacts of the Southern Highway Project, IDB approved a separate \$2.6 million loan for the Environmental and Social Technical Assistance Project (ESTAP) in March 1997. ESTAP is developing a regional plan that is supposed to address comprehensive development issues, including the road and mitigation of its indirect impacts. ESTAP appeared to be on its way to developing the plan, and had active participation of local groups and the government of Belize (GOB). However, ESTAP had not finalized the regional plan prior to board approval of the Southern Highway project. Also, no funding was available or committed to the implementation of the plan. An approved environmental and social mitigation plan -- and financial commitments to implement it -- are essential to have in place prior to board approval of any infrastructure project. Both the ESTAP and Southern Highway project continue to be controversial.

The following USAID recommendations were based on field observations and interviews with government officials, various representatives of Maya organizations, and local representatives of environmental groups. USAID recommended the following for USG support of the Southern Highway Project:

1. IDB should put in place adequate funding for Protected Area Conservation Trust (PACT), specifically for a protected area mitigation program in southern Belize, before board approval of the Southern Highway Project. This was also recommended by the project's EIA, and ignored by IDB and GOB. The terrestrial

protected areas system in southern Belize has very little in the way of infrastructure and trained staff, making it particularly vulnerable to outside pressures. Forest Reserves are especially susceptible since they have logging leases in them, and, Colombia River excepted, do not have management plans or sufficient monitoring.

2. GOB compliance with final recommendations regarding land tenure of all ethnic groups (especially Mayans) of the Regional Development Plan resulting from the ESTAP process should be made a condition of the project prior to letting out bids for construction. The land tenure situation of ethnic groups in the region, especially the Maya, is extremely vulnerable. Though ESTAP is designed to address the situation, government support of a resolution appears to be mixed.
3. ESTAP needs to place more emphasis on addressing marine and coastal issues. A more thorough review of impacts on coastal and marine ecosystems and possible mitigation measures should be completed as a condition of the project prior to letting bids for construction. Belize's globally important barrier reef and other coastal and marine ecosystems will be affected by the change in water quality due to road-induced land use changes.
4. A formal environmental and social analysis should be performed on a recently approved petroleum exploration lease in southern Belize. The analysis should comply with the rules and regulations of the existing Environmental Protection Act of Belize. This petroleum exploration lease in southern Belize has not been addressed by the project's EIA (the lessee plans to drill test wells in the area of Crique Sarco). This EA should be completed as a condition of the loan prior to letting bids out for construction.
5. It is also strongly suggested that private sector interests be actively brought into to the ESTAP process through the Project Steering Committee or other appropriate means. There has been little involvement to date, and the private sector will play an important role in the region's development.
6. IDB should clearly document the various donor interests in the region in the project documents, and ESTAP should provide a strong mechanism for donor coordination in the southern region. For the Southern Highway Project to become an impetus for sustainable development in the region, donor coordination in the Regional Development Plan will be essential.
7. The Southern Highway Project should be brought back to the board for re-approval before letting out any bids for construction. A report on progress of these recommendations, especially 1 through 4, and

that of ESTAP should be made available to the board and to the public 90 days in advance of this board vote.

In March 1999, IDB staff responded to each recommendation made in the USAID report on this project:

The Protected Areas Conservation Trust (PACT) is in place. With the adoption of the PACT Act (No. 15 of 1995), the PACT was established. It became effective on January 2, 1996 and the Trust began operation on June 1, 1996 by order of the Minister of Natural Resources. According to the Act, PACT can generate revenue through various sources, but specifically from the collection of "twenty percent of all concession fees, recreation-related license fees, cruise ship passenger fees, and permit fees collected in conjunction with the public protected areas of Belize".

1. As a Bank condition stated in the ESTAP Technical Cooperation Loan Agreement, prior to awarding contracts of the physical works, the PACT was to provide a list of priorities and supporting documentation for improved protected areas management in the southern region for potential inclusion in the PACT five-year strategic plan. This condition was met. In addition, PACT provided further assistance to two protected areas management groups in the Toledo District (Aguacaliente Management Group, and the Rio Blanco Maya Association) to become legally registered organizations. PACT is also currently sourcing funds for a series of protected areas in the southern region.
2. Prior to Board approval of the Southern Highway Loan, in a letter to the IDB President dated December 8, 1997, the Prime Minister of Belize expressed Government's full appreciation of the concerns of the Maya in connection with land tenure and reiterated Government's commitment to addressing this issue within the context of ESTAP. In a separate letter to the Maya leaders of the same date (December 8, 1997) the Prime Minister of Belize informed that "any allocation of land in the Toledo and Stann Creek Districts is to be consistent with ESTAP's land use planning consideration". In a subsequent meeting between the Community Representatives of the ESTAP Project Steering Committee and the Prime Minister on May 8, 1998, the Prime Minister restated this commitment.

Second, the ESTAP Technical Cooperation Loan Agreement imposes a freeze on new applications for government lands along a two-mile corridor along the Southern Highway. Last year during the pre-election campaign the Bank was informed that Government issued some leases which, after review by an independent consultant hired to conduct the review, it was found that 25 leases were issued within the two-mile corridor. After verification by the Lands Inspector of the ESTAP Land Use Unit this was confirmed and the list of leases

were sent the Ministry of Natural Resources. This Ministry immediately made its own verification and proceeded to cancel the leases found to be within the two-mile corridor. In the final resolution of this matter, the Ministry of Natural Resources has written to the Bank informing it of the official cancellation of the leases and reaffirming Ministry's commitment to temporarily freeze new applications for lands within the two-mile corridor.

3. The ESTAP Environmental Protection Unit conducts regular water monitoring activities along the rivers that cross the Southern Highway as well as within the Port Honduras area, the coastal basin that receives the discharge of six of these rivers. Furthermore, in order to build local capacity to monitor potential impact of development on the coastal zone, the Bank approved a Community-Based Coastal Environmental Monitoring project (ATN/CP-6110-BL) in August 1998. Thus, along with the monitoring system that ESTAP is to put in place, this project will assist in ensuring continued monitoring of impacts to the coastal zone in the southern region.
4. While it is known that a petroleum exploration lease has been issued to "A B Energy" in southern Belize, there is no known activity regarding this concession occurring in the region. The Government has informed us that the Department of Environment has officially requested that an environmental assessment, which includes addressing the social and economic impacts to the region, be conducted. Permission to go ahead with the exploration activity, therefore, can only move ahead if the result of environmental assessment is considered satisfactory by the Department of Environment and the National Environmental Appraisal Committee.
5. The regional development plan is being developed through a participatory process involving all the stakeholders of the southern region including communities, community groups, landowners, private developers, etc., as required by the ESTAP Technical Cooperation Loan Agreement. Consultation has taken place with the banana growers, rice growers, and the tourism industry personnel of the region, among others. Once the plan is drafted the various stakeholders will be consulted on the draft before Government final approval. Regarding the ESTAP Project Steering Committee, of its 14 members, 9 are non-government representatives representing communities, community groups and NGOs, otherwise private sector interests.
6. The Ministry of Economic Development, which is the Executing Agency for ESTAP maintains permanent coordination with the donor countries in Belize, particularly the British Department for International Development (DFID), the Caribbean Development Bank (CDB), the Kuwait Fund, the Taiwan Fund, and the World Bank. The DFID is financing Section III of the Southern Highway for which the physical work has

already started; the Caribbean Development Bank is funding part of the administrative cost related to the Executing Agency of this Project. The Taiwanese government is co-financing with the IDB Sections IV and V of the Southern Highway, and the Kuwait Fund has financed Section I, which is almost completed. At last year's annual meeting of the Caribbean Group for Cooperation in Economic Development (CGCED) Belize's Prime Minister officially stated his Government's request for awareness on the part of the donor countries that the Government of Belize will be looking for financing for the implementation of the Regional Development Plan. IDB is asked to coordinate the Belize's request to CGCED.

7. Regarding the recommendation for "Board re-approval", there is no reference in the Southern Highway Loan documents concerning re-approval even though the Board has asked to periodically review progress on the project. The Loan was approved in January 1998; the contract was signed also in January 1998, and the Project is being executed according to the Loan conditions established in the Loan contract and its related document.

It is good that ESTAP is coordinating with PACT, but it is certain that PACT would have funded the protected area projects mentioned in point one without the Southern Highway Project. What the EIA intended was that the project itself should provide additional funds to specifically mitigate the impacts of the Southern Highway on the region's roads. The project has provided no mitigation funds for protected areas in the region. This is an egregious oversight and remains an unresolved issue. Fortunately, many of the other social and environmental issues are on their way to being resolved.

USAID's concerns regarding this particular project (funding for mitigation programs, secure land tenure for indigenous peoples, adequate environmental/social analysis, and participation issues) are generally applicable to other transport sector projects funded by MDBs. Five other road projects are listed in this year's report and are indicative of the weakness in addressing these issues. Twenty percent of both the 1998 and 1999 report's consisted of transport sector projects. MDB-supported transport sector projects continue to be a major source of environmental and social concerns. When properly planned and implemented, roads can be key to the sustainable development of a region. When poorly done, they can be the cause of deforestation, biodiversity loss, land speculation, and marginalizing of ethnic peoples. Prior resolution of the above issues is essential to the success of a transportation project and avoidance of serious and long-term environmental and social impacts on a region and its development.

**REVIEW OF ENVIRONMENTAL ASSESSMENT CATEGORIES AT MDBS**

In recent years most of the multilateral development banks (MDBs) have come a long way toward integrating environmental concerns into their loan criteria and sector policies. Most have developed environmental assessment categories based on the nature, importance and sensitivity of environmental issues. Since 1990, several banks have newly developed or changed their environmental assessment procedures and classification systems. They are not all the same, so a summary of their classification systems follows.

World Bank

{International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), & International Finance Corporation (IFC)}:

- Category A: Environmental Assessment is normally required as the project may have adverse and significant environmental impacts.
- Category B: More limited environmental analysis is appropriate, as the project may have specific environmental impacts.
- Category C: Environmental analysis is normally unnecessary.
- Category U: Unclassified indicates structural adjustment loans, which do not fall within one of the above three categories for purposes of the [operational] directive governing environmental assessment.
- Category T: To be determined.
- Category FI: IFC only -- relates to financial intermediaries whose subprojects may result in environmental impacts, thus requiring an environmental review by the intermediary, according to IFC procedures.

African Development Bank (AfDB)

- Category I: Projects that may have significant environmental impacts, requiring detailed field review and an Environmental Impact Assessment (EIA) study.
- Category II: Projects with limited environmental impacts that can be mitigated by applying specific measures in the project design.
- Category III: Projects not anticipated to result in adverse environmental impacts, for which environmental analysis is normally unnecessary.

Asian Development Bank (ADB)

- Category A: An EIA is undertaken for those projects for which significant adverse environmental impacts have been



forecast in the initial environmental examination (IEE).

Category B: An IEE confirms that there are no significant adverse environmental impacts requiring a detailed EIA. The IEE represents the complete environmental assessment report. Projects in this category may have adverse environmental impacts that are of a lesser degree than Category A impact; mitigation measures for these impacts are more easily prescribed.

Category C: An environmental assessment is normally not required for Category C because the project is unlikely to have adverse environmental impact.

Inter-American Development Bank (IDB)

IDB revised its EA categorization procedures in March 1997. As of yet, there is no information available on the new procedures. The former procedures are described below:

Category 4: Operations that may have significant negative impacts on the environment and will require a detailed environmental assessment.

Category 3: Operations that may have a moderate impact on the environment but for which there are recognized and well-defined solutions.

Category 2: Operations that have no direct or indirect environmental impact.

Category 1: Operations designed specifically to improve environmental quality.

Illustrative examples:

The Asian Development Bank gives illustrative examples of each environmental category of project. These are generally representative of all three basic categories used by the MDBs. They are:

Category A (World Bank A, AfDB I, and IDB 4):

- Forest industries (large scale)
- Irrigation (large scale with new source development)
- River basin development
- Large scale power plants
- Large scale industries
- Surface and underground mining
- Large water impoundments
- New railways/mass transit/roads (near or through sensitive areas)
- Ports and harbors
- Water supply (with impoundments and/or river intakes)

Category B (World Bank B, AfDB II, and IDB 3):

- Agro-industries (small scale or no wet processing)
- Renewable energy
- Aquaculture and mariculture
- Rehabilitation, maintenance and upgrading projects (small-scale)
- Industries (small-scale and without toxic/harmful pollution discharges)
- Water supply without impoundments or new river intakes

Category C (World Bank C, AfDB III, and IDB 1 & 2):

- Forestry research and extension
- Protected area establishment and management
- Marine sciences education
- Geological or mineral surveys
- Education
- Family planning
- Capital market development study
- Securities Ltd.

Stage of World Bank Processing for a Typical Project:

1. Identification
2. Preparation, including feasibility studies, alternative studies, environmental assessment
3. Preparation mission
4. Pre-appraisal mission
5. Pre-appraisal
6. Appraisal mission, including comprehensive review of all aspects of the project
7. Appraisal report preparation concludes this stage
8. Negotiations
9. Board date and approval
10. Signing of loan agreement
11. Implementation

**LIST OF UPCOMING MULTILATERAL DEVELOPMENT BANK (MDB) PROJECTS  
WITH POSSIBLE ENVIRONMENTAL CONCERNS**

**PROJECTS LOCATED IN AFRICA**

**1. Western Africa: IDA/AfDB - Regional Hydropower Development (Mali,  
Mauritania, and Senegal)**

Projected AfDB: \$ 20 million  
IDA Funding: \$ 38 million  
Projected Total Cost: \$444 million  
Tentative AfDB Board Date Indefinite  
WB Board Date: June 1997  
Stage: AfDB, negotiations completed in  
November 1997, but board consideration  
is pending a policy determination on  
multinational projects. World Bank  
approved its loan in June 1997.

AfDB Environmental Category: **I**  
World Bank EA Category: **A**  
WB Project ID: SNPA46648  
Project first entered: March 1997  
Entry last updated: April 1999

Description: The main objectives of this proposed project are to: (a) install power generation capacity to generate economic and financial benefits from the Manantali dam which has already been built, and encourage cooperation and energy exchanges between the three member countries; (b) help minimize the long-term cost of electricity supply to the three countries; (c) provide hydropower to help meet increased demand for electricity and reduce fuel costs (in Dakar, Bamako, and Nouakchott); (d) strengthen the Organization of the Development of the Senegal River (OMVS) and the power sector entities in the three countries and establish an effective organization to manage and operate the Manantali dam and project facilities with satisfactory procedures, in particular regarding safety, health and environment protection; and (e) contribute to develop traditional agriculture downstream through the rational management of the Manantali reservoir.

The proposed project would include the following components:

(a) construction of 200 MW hydroelectric plant (5 units of 40 MW each and civil works); construction of 225 KV high voltage transmission lines to Bamako (306 km) and to Decker (821 km) along the Senegal River, and a 132 KV transmission line to Knocked (219 km); construction of 11 substations and a dispatching center; supervision of project construction;

(b) technical assistance and training (support to OMVS and The Society de Gestio de l'Energie de Manantali (SOGEM), including regulatory, reservoir management, health and environment aspects and for the recruitment of a private operator for the project).

Issues: The Bank has done a commendable job in recognizing downstream and water management issues for the lower Senegal River in conjunction with this project. It has the potential to promote a win-win development program -- by achieving sound development goals with economic, environmental and social sustainability. However, it is not clear from the EA and other project documents that the project design takes full advantage of this opportunity.

Background: Since its completion in the late 1980's, the Manantali Dam on the Bafing River in Mali, which controls about 45% of the total Senegal River flow, has aggravated environmental and socioeconomic conditions downstream, adversely affecting the well-being of hundreds of thousands of riparian households. The pre-dam flood regime supported a dense human and livestock population in a low rainfall area. The flood made possible a sustainable seasonal succession of fishing, herding, flood-recession farming, reforestation, and aquifer recharge.

The cessation of the natural flood, and the inconsistent and flawed attempts to provide simulated floods, have resulted in incidents of social conflict in the valley; herders and fishers now must compete for land and water resources they previously were able to use mutually. Poverty and out migration have increased, as productive yields have declined. Labor burdens for women, children and the elderly have increased without corresponding increases in income.

USAID realizes that this project is trying to rectify some of the downstream impacts that the dam has had, while trying to realize its economic potential through hydropower development. However, the EA Summary (January 1997) does not analyze the downstream environmental and social impacts that the Manantali has had, or refer to a host of studies on the subject. Though the EA proposes a Water Management Optimization Program to address downstream issues, it is vague on what OMVS will be held accountable to. USAID supported the Institute for Development Anthropology's studies of resettlement upstream from the dam and environmental and socioeconomic impacts of the changed river regime downstream. These studies conclude that a properly managed release of reservoir waters replicating the natural flood would substantially restore the pre-dam production system without adversely affecting hydropower potential.

The issue of dam management has been much debated and politicized. Based on the above research, the government of Senegal is willing to follow recommendations regarding a controlled release program. Mali

has been indifferent on the subject, as long as power is generated, since most of the floodplain is downstream from the country. Mauritania is apparently resistant to the idea since it is seeking a shift from traditional production to large-scale irrigation.

USAID understands that ORSTOM, a French agency, has been selected to carry out an optimization study. ORSTOM historically has shown little enthusiasm for maintaining the traditional production system, and its river-flow model for dam releases should be replaced by one based on rainfall and runoff data from the Fouta Djallon, where at least five collection stations are tied into the meteorological satellite network. The latter model would substantially enhance real time forecasting, and should be carefully considered. A comparative analysis of the two models would be in order. The World Bank reported that ORSTOM is using real time (tele-detection) modeling based on rainfall and run-off data upstream, and also on measured flows of downstream river tributaries (for better timing of the artificial flood).

Given the current situation, USAID suggests the following:

- (1) The Bank should try to leverage as much as possible a policy change at OMVS, to include as one of its fundamental objectives the management of the Senegal River basin for recessional agriculture and other flood-based activities in an integrated way with electricity production.
- (2) Loan disbursements should be conditioned on the successful implementation of this integrated approach. Especially, the private operator of the project should have incentives *and* disincentives in its contract that would ensure an optimal artificial flood while producing a maximum of electricity. The operator should not receive bonuses based on electricity production alone.
- (3) Downstream villages should be given representation on the board of OMVS, or in some other significant way have an ongoing voice in reservoir management.
- (4) The project's environmental assessment should be expanded to include (or refer to) an analysis of downstream environmental and social impacts.

Status: The World Bank's financing of the project was approved and signed in June 1997. The African Development Bank's financing decision is pending passage of its policy on multinational projects.

USAID and Bank staff met regarding the above issues. Bank followed up with the following comments: Although the EA summary of January 1997 is not clear enough on how the project would contribute to achieving

the sound, use-balanced management of water resources from the Manantali reservoir, this issue is much better addressed in the Environment Impact Mitigation and Monitoring Plan (PASIE) which has just been finalized by OMVS and its consultant, as well as in the corresponding sections of the SAR on environment, social and health aspects, which should be sent to the Board during the first week of June 1997. These aspects will be discussed during credit negotiations; specifically, agreements must be reached on: (i) detailed actions and budget to carry out the environment impact mitigation and monitoring program (PASIE), in particular for involuntary resettlement and land acquisition; (ii) final terms of reference for preparing the Manantali reservoir management agreement.

On background, the three countries will, through OMVS, undertake an agreement (Charter) for the sound management of the Manantali reservoir. OMVS will be held accountable for monitoring the proper application of the agreement, while the private operator of the hydropower plant will be charged of the actual implementation of the reservoir management program. Adequate dispositions will be defined in detail during the studies financed by IDA, CIDA and France under the project. The study, contracted by the Bank to a hydrology specialist during project preparation, confirms the results of other detailed studies regarding the need/feasibility of maintaining artificial flooding without adversely affecting hydropower potential.

Also on background: after verification with Bank staff working in the agriculture sector in this country, Mauritania is not "resistant to the idea (of a controlled release program) since it is seeking a shift from traditional production to large-scale irrigation". Indeed, in its REPORT, Mauritania clearly defines the important role that artificial flooding will continue to play in the valley, in complement to the irrigation program.

On USAID suggestions: what is suggested in this section is precisely what will be done through the project, OMVS subscribing to a Charter for sound management of the Manantali reservoir; dated covenant in Credit Agreements regarding this Charter; adequate incentives/disincentives in the contract of the private operator to ensure application of the Charter's dispositions for artificial flooding. It is not planned, however, to expand the EA on downstream environmental and social impacts, because both the EA and the PASIE refer to detailed studies carried out on these aspects and endorse in large part their conclusions.

USAID remains concerned about how sound management of the Manantali reservoir will be achieved as the operating principles or objectives of the agreement (Charter) have yet to be defined. USAID review of the study concluded that it indicates hydropower would compete with flooding. The EA does not refer to nor endorse numerous studies on

downstream and public health impacts of the dam. USAID has recently (May 1998) begun work on disseminating information on the project to downstream water users and other stakeholders. USAID will continue to dialogue with the Bank on these issues.

**2. Chad-Cameroon: IBRD/IFC - Petroleum Development and Pipeline**

Projected IBRD Funding: \$ 90 million  
Projected IFC Funding: \$ 250 million  
Projected Total Cost: \$ 3.5 billion  
Private sector sponsors: Exxon International, Royal Dutch Shell, and Elf Aquitaine. Exxon's local affiliate will be the operator of the project.  
Tentative WB Board Date: July-September 1999  
Stage: Appraisal mission is scheduled for late May 1999. IDA: A draft EA is being revised by the borrowing governments, and a comprehensive EA summary is expected end of May 1999. IFC: Financing negotiations underway; financing negotiations underway.  
World Bank EA Category: **A**  
IBRD Project ID: TDPE44305  
IFC Project ID: 4338  
Project first entered: March 1997  
Entry last updated: April 1999

Description: The project involves the development of Chad's oil fields and the construction of a petroleum export pipeline from the south of Chad to the Atlantic coast of Cameroon and related marine installations. The objectives of the project are:

- a) to promote the economic growth of Chad and Cameroon through the private sector led development of Chad's substantial petroleum reserves and their export through Cameroon; and
- b) to strengthen Chad's management of petroleum revenues through a technical assistance component.

The project would involve:

- a) the development of 300 production wells in Chad's Doba oil fields;
- b) the construction of a 30-inch, 1,050-km buried pipeline (170 km in Chad, 880 in Cameroon) from Chad's oil fields to Cameroon's Atlantic coast, and related pumping stations, ancillary facilities and infrastructure; and
- c) the installation of marine export terminal facilities in Cameroon (a moored floating storage and offloading vessel), and associated marine pipelines and related facilities.

Issues: If approved, this would be one of the largest construction



projects in sub-Saharan Africa. The project is mentioned in the World Bank's country program strategies for Chad and Cameroon.

The African Forest Action Network (AFAN), representing some 70 African NGOs engaged in the forest sector in anglophone and francophone Africa, is a major USAID partner in Cameroon for carrying out the Central African Regional Program for the Environment (CARPE). USAID met with the Network (in 1997) to review its concerns regarding the project. AFAN was concerned with the three alternative pipeline routes and how they would affect sensitive ecosystems. AFAN was also concerned about public consultation in conjunction with the EIA; it sees public meetings as a useful forum for discussing the project.

The Cameroon Environment and Development NGO (CED) reported that the EA is not readily available within Cameroon, that it can only be read inside a certain office, photocopies are not able to be made, and (2) clearing for construction preparation has already begun in the area south of Kribi, and (3) the mitigation plan in Cameroon has not yet been made available for review.

CARPE is currently supporting the assessment of biodiversity priorities in Cameroon; additional studies are planned for the identification of priority areas for biodiversity conservation in the Congo Basin as a whole. Initial results indicate that forest-savanna ecotones (areas bridging forest and savanna ecosystems) are of particular interest because they contain a high degree of endemic species and important ongoing evolutionary processes. USAID suggests that these areas be taken into account during the EA process.

Status: The US Executive Director's office hosted a January 1999 briefing by Bank staff for interested USG agencies. Bank staff announced that it would produce a "unified environmental and social assessment" that will include the all assessment and related documents:

- EAs for Chad and Cameroon received November 1997
- EMP for Chad - November 1997
- EMP for Cameroon - February 1998
- Chad Compensation/Resettlement Plan - February 1998
- Cameroon Compensation Plan - September 1998
- Chad and Cameroon Environmental Management Plans (inc. tech. specs.)
- Chad Compensation/Resettlement Plan
- Cameroon Compensation Plan
- Chad Rural Development Plan
- Community Health Outreach Program
- Oil Spill Response Plan
- Decommissioning Plan

- Indigenous Peoples Plan in Cameroon
- Environmental Offset Program in Cameroon

Bank staff was hoping for a July board date, however, this will probably be delayed by the 120-day requirement for public review of the Environmental Assessment prior to the board vote. Until the unified EA document and supporting material are on file at the World Bank, the USG will not begin to count the 120 day period-- which is required by the Pelosi Amendment as well as by WB policy (notwithstanding IFC's separate policy which requires only 60 days). According to staff, preliminary disclosure and consultation with local peoples will happen before the official transfer of the final project documents. Revisions to many of the above documents have been made after review by the World Bank, ED's offices, Chad and Cameroon governments, in-country public review, and international NGOs.

Progress has been made on the re-routing issue. A recent meeting had been held with the government of Cameroon, the consortium and Bank staff where this was discussed extensively. Pipeline routing issues: The pipeline will avoid, in part, some sensitive areas that were of concern: The Mbere Rift Valley near Chad has been avoided (the pipeline will follow the ridge); most of the Deng Deng forest was avoided (the pipeline will now follow a railroad ROW through central Cameroon); environmental offsets were still pending as new areas for protection have yet to be chosen by the government of Cameroon. The proposed trust fund would underwrite costs for the management of the new protected areas. Regarding coastal forests, the pipeline has to go through some of these to get to the coast. Various alternatives were studied, but project staff concluded that the pipeline should go along the alignment that was originally chosen.

Some resettlement has occurred already in Chad, though there is not supposed to be any resettlement in Cameroon -- only compensation for lost land. There is still no indigenous peoples plan for the project, nor has the associated trust fund plan been established. The Bank is consulting with GEF on how to manage the trust fund.

A new revenue management plan has been passed in Chad, though it is questionable how much effect this law will have on the project. The World Bank's leverage to push for equitable revenue sharing on the Chad side is limited, but the Bank has said that it will include language in the loan agreement stipulating that Chad's failure to comply with requirements will negatively affect future Bank funding for the country. Major questions continue to surround the security situation and the role of the military in Chad. Several other issues were also discussed at the Bank staff briefing (additional oil production areas in Chad and their possible connection to the project, project design capacity, the regional development plan, and the policy letter passed by Chad's parliament. [USAID: April 1999]

World Bank staff gave a briefing to USG representatives (including USAID) on this project in April 1997. On consultation, Bank staff reported that nine NGOs (both international and local, though these did not include AFAN), 68 villages, local governments and several towns had been consulted regarding the pipeline project. The Bank had released the draft EA and mitigation plan for Chad, and the EA for Cameroon. The EA was divided into two parts, the Chad EA on oil field and pipeline development, and the Cameroon EA on pipeline and export facilities (no refineries are associated with the project). With the Bank's encouragement, the governments established expert panels to assist them in analyzing the draft EA and to evaluate and comment on the mitigation plan.

The project sponsors planned to consult with AFAN as part of its ongoing public consultation process. In particular, an extensive in-country survey of the pipeline route was conducted during the second half of 1997. This survey included consultations with NGOs and villages along the route. Consultations with the public have also occurred in 1998 and 1999 in Chad and Cameroon.

The sponsors have indicated that the Bank's participation is essential for the project to go forward. The sponsors and Bank have taken a proactive approach on environmental and social aspects of the project. The governments and the Bank have discussed transparent oil revenue budgeting mechanism in association with the project. Revenues would be channeled through the government of Cameroon or Chad's national budgets that would help ensure accountability. Chad's Parliament has adopted an Oil Revenue Management Law

**3. Guinea-Bissau: AfDB - Etudes Routes Boke-Quebo (Boke-Quebo Road Study)**

Projected AfDB Funding:	\$1.4 million
Projected Total Cost:	\$ 40 million
Projected Date to AfDB Board:	Second half of 1999.
Stage:	Final
AfDB EA Category:	<b>none given</b>
Project first entered:	December 1996
Entry last updated:	April 1999

Description: The study involves the preparation of technical aspects of bidding and contract documents for the road.

Issues: USAID staff suggest that the planned study would be for an Environmental Category I project, and that the construction of the proposed road (southern Guinea-Bissau to northwest Guinea-Conakry) would pose environmental risk. This new road may threaten nearby coastal forests and biodiversity, including habitats of the forest elephant, chimpanzees and numerous other important species. [e-mail: USAID/Bissau 16Dec96]

Status: According to the AfDB, the Islamic Development Bank prepared the feasibility study for this project. The Task manager agrees that the project should be a Category I project due to the coastal zone and biodiversity importance; a full Environmental Impact Assessment will be done. AFDF will not fund this alone, and is seeking other financiers. [fax: AfDB/USED 07Feb97]

The study has been delayed due to civil strife in Guinea-Bissau, funding may be available for the study during the second half of 1999. (AfDB email: 20Apr99]

**4. Madagascar: IDA - Transport Sector Project**

Projected IDA Funding: \$ 50 million  
Projected Total Cost: \$436 million  
Tentative WB Board Date: September 1999  
Stage: Appraisal mission is scheduled for June 1999.  
World Bank EA Category: **B**  
Project ID: 52208 (formerly MGPA01534)  
Project first entered: January 1997  
Entry last updated: April 1999

Description: The project will:

- a) support the restructuring of public enterprises in charge of road and rail transport and coastal shipping;
- b) finance limited improvements to road and transport infrastructure; and
- c) support privatization of transport activities.

Issues: Madagascar's new law for investment, MACAW, requires that 0.5 percent of the investment (be it private or public) will be set aside for environmental evaluation. This could be a good test case for Madagascar to try the effectiveness of the law and local ability to enforce it. [e-mail: USAID/Madagascar 18Dec96]  
This would be excellent opportunity to test the capacity of Madagascar's environmental impact legislation, MECIE (*Mise en Compatibilite des Investissements avec l'Environnement*) Law No. 95-377. Though thresholds have not been clearly established, private and public investment in infrastructure is point 20 of Annex 1 of the law, which specifies the list of investments requiring environmental impact assessment in Madagascar.

In the project's Environmental Data Sheet, under the section on major environmental issues, only two areas of concerns are identified. USAID/Madagascar would also include (1) road site/railroad site impacts (such as worker camps, use of local natural resource material, etc) and possible mitigation measures; (2) track replacement and its environmental consequences; and (3) water-routing changes or impacts and presence of wetlands in construction of selected waterways infrastructure. [USAID/Madagascar email, 4/07/98]

Status: World bank staff reported that the timing of the project's preappraisal was completed in December 1998, including an annex on environmental issues. Though MECIE has not been regulated yet at a Ministerial level, this annex recommends a methodology for uniform application of EA procedures. [WB email, April 1999]

The railways component has not been included in this project, and is being planned for the second phase of the transport project.

Regarding waterways, the studies are almost completed. The project should only include, on a pilot basis, small investments aimed at facilitating river navigation, i.e. loading docks. The Bank takes note of the issue raised with regard to water-routing changes or impacts and presence of wetlands. [WB email, 5/08/98]

**5. Madagascar: IDA - Health II**

Projected IDA Funding: \$ 25 million  
Projected Total Cost: \$ 27 million  
WB Board Date: 1999  
Stage: Appraisal mission is scheduled for July 1999.  
World Bank EA Category: **C**  
Project ID: MGPE51741  
Project first entered: April 1998  
Entry last updated: April 1999

Description: The project will:

- a) support the process of decentralization of the health delivery system currently under way;
- b) reinforce the health care services at the district level; and
- c) strengthen public health programs and promote community-managed cost recovery.

Issues: This project is very important to the full achievement of USAID/Madagascar's Strategic Objective No. 2, "Smaller, Healthier Families" and USAID/Madagascar is substantively involved in discussions with the World Bank and other partners concerning the project's development. However, Mission recommends a Category B rating although the EA category for this project is yet to be determined [as of April 1998].

Two issues should be included in the EA scope: (1) Provisions must be made for negative environmental impacts during rehabilitation or construction of health centers or hospitals and mitigation measures should be specified in the design to address potential construction impacts; (2) It is not clear from the Project Information Document (PID) whether this project will supply hospital or clinic products which may result in biohazard wastes. If so, provisions must be made to address waste issues.

In the Environmental Aspects section of the PID, the use of DDT is mentioned. "Spraying of DDT will not have a direct negative impact on the environment as it will be residual indoor spraying and limited to small geographical areas on the fringes of the highlands."

In an USAID 1995 Report on Pesticide Use and Pest Management in Madagascar, the use of DDT is noted. "Citizens on the high plateau are required to allow its application to the inside of their homes for malaria control every year. The chronic human health effects of this chemical can include liver damage, degeneration of the central nervous

system, dermatitis, weakness and convulsions. Tremors are one of the most noticeable effects of long-term exposure to DDT, even at fairly low concentrations (Rengam and Snyder, 1991). In spite of these potential problems, no one has monitored or kept systematic records of this or any other pest-management campaign, even for applicator positioning. Institutions that could contribute to a program do not coordinate their activities at present.... As a result, little information is available about pesticide impact on human health and the environment in Madagascar."

This project, if it proposes DDT use, should assure user safety, address storage and handling issues and most importantly -- make an effort at addressing the issue of long term use or even single exposures through appropriate studies. Finally how localized would DDT spraying be? It is not clear whether the spraying is only an interior household campaign or it implies the immediate surrounds as well. [USAID/Madagascar email: 4/07/98]

Status: World Bank staff responded that the content of this forthcoming project is being reconsidered by the Ministry of Health. Provided that the new project includes health infrastructure works and indoor DDT spraying, we will carefully address the question of hospital waste and DDT chronic health effects, and, of course, the project's environmental category. [World Bank email: 5/08/98]



**6. Madagascar: AfDB - National Locust Control Program<sup>a</sup>**  
**[Projet National de Lutte Antiacridienne (PNLA)]**

Projected AfDB Funding: \$ 7.2 million UC  
Projected Total Cost: \$11.2 million UC (about US\$14 million)  
AfDB Board Date: End 1999  
Stage: Appraisal report dated October 1998  
AfDB EA Category: I (originally II)  
Project ID: Unknown  
Project first entered: April 1999  
Entry last updated: April 1999

Description: The AfDB project's financing will support the preventive control component of the national locust control plan. It will be implemented over a five-year period with funding by the AfDB. The objectives of the project are to:

- a) support institutional strengthening, infrastructure, human resource development, materials and finances sufficient for locust control and prevention;
- b) provide technical assistance;
- c) establish monitoring and control teams (composed of technicians from the Directorate of Plant Protection and Farmers) in the areas of swarming, and support the teams' training and equipment needs; and
- d) investigate alternative methods of control, compatible with the environmental concerns, in particular biopesticides.

The components of the preventative control project consists of:

- a) monitoring for locust;
- b) research and training; and
- c) project coordination and management.

Issues: USAID has had the following concerns regarding the initial proposal for this project:

- a) The October 1998 project appraisal report (project paper) was based on an EA category II project, which did not require an environmental assessment. The proposal downplayed the fact that pesticides would be used. Yet pesticide use is inevitable for a locust prevention program -- if effective (timely, well-targeted) the amounts ultimately needed are greatly reduced, because it prevents or reduces the formation and spread of ever larger swarms. In fact, approximately \$8 million were budgeted for insecticides (although these funds were to be provided by another donor).
- b) In February-March 1999 USAID/Madagascar and the US Ambassador to Madagascar informed AfDB of their concerns regarding the project's locust biocontrol component. This was billed as the major element of

the locust preventive intervention "hinging on integrated pest management methods." Not only does this underplay the role of synthetic chemical pesticides, the proposed AfDB project had component that seemed to call for the introduction of an exotic locust pathogen (a fungus) into Madagascar. The proposed introduction of an exotic pathogen into Madagascar was controversial because of its potential negative effects on native biodiversity. Madagascar's has highly diverse -- and threatened -- animal and plant life, most of which is found nowhere else in the world. Exotic introductions are of particular concern to island nations. As a result, Madagascar is particularly sensitive about the integrity of its native biodiversity and intellectual property rights.

- c) As initially proposed, the AfDB project did not seem to take into account the fact that Madagascar already has its own program of research (funded in part by USAID/Madagascar over the past seven years) on a Malagasy species of fungal biopathogen of the same genus as the one being proposed within the AfDB proposal. The Malagasy species, which has gone through two large-scale field trials as part of the GOM's requirements for the pathogen to be registered, was developed entirely in Madagascar. The development of an indigenous biopathogen has been central to the GOM and USAID's support for locust biocontrol, in the name of environmental protection and biodiversity preservation. At the same time, this program builds local research and development capacity in locust control alternatives and opens opportunities for community-based enterprise development. The optimum approach would involve a consortium of all major research initiatives involved in locust biopathogen development.
- d) As a result of these concerns, AfDB postponed the board consideration of the project, reclassified the project as an Environmental Assessment (EA) Category I, and began to consider whether the EA being planned for the Madagascar locust program as a whole would serve the needs of the AfDB. This EA is expected to be completed towards the end of 1999. However, this then raised the prospect of delays in the approval of the project because of the additional time needed to complete the EA, even if initiated expeditiously, followed by a 120-day review period before it is submitted for approval by the MDB board. USAID/Madagascar has sought assistance to promote expedited completion of the EA process. The locust donors here recommended that the FAO assessment team being assembled in May 1999 (see below) be capitalized upon and used to help assemble an overall programmatic approach for the locust program. In this way the program formulation and EA teams would be closely parallel.
- e) USAID/Madagascar is supporting the development of a programmatic EA for the preventative locust management program, being developed by Office National de l'Environnement (ONE) and the Natural Resources

Institute - UK. ONE and USAID are encouraging all parties to buy into the Terms of Reference for and completion of this EA. The World Bank, EU, the French bilateral development agency, and other donors are currently supporting an emergency locust control program, funding for which runs out in June 1999 after one year of operation. On request of GOM and the donor coordinating group, FAO is carrying out an assessment of the locust outbreak status and developing an operations plan for short-, medium- and long-term locust management, "Mission de Formulation d'un Programme de Lutte Antiacridienne a Court (Juin-Decembre 1999).

- f) Overall donor coordination with locust prevention and control in Madagascar is an issue. Full consensus remains to be achieved regarding the complementarity of respective donors' and Malagasy interests. Coordination will be key to the success of future locust prevention and control measures. The AfDB proposal should fully capture efforts made by others, including the World Bank, EU, France, USAID, GTZ, FAO, and other donors in host-country capacity strengthening through training, and try to build on these initiatives as much as possible. USAID encourages an active participation by entities such as FOFIFA (Centre National de la Recherche Appliquée et Développement Rural) and the University of Madagascar as partners, particularly in the medium- to longer-term locust management activities, e.g., research, environmental assessment, and technology development and transfer.

Status: Efforts are presently underway to achieve as much of a convergence as possible around a short-, medium- and long-term plan for locust management in Madagascar, including a programmatic EA which involves the key Malagasy partners (ONE, National Locust Control Department), donors and technical assistance agencies.

The AfDB/USED's office responded to the above issues:

Issue a) Regarding the EA category in paragraph a) above, the original project was based on the emergency phase being a category II and the fact that the Bank's financing was supposed to be a part of this emergency phase in 1997. When the project was converted to be preventive in nature is when the oversight to reclassify took place - e.g. it was not nearly as deliberate as this paragraph implies.

Issue d) Board consideration was postponed because the project was reclassified from category II to category I therefore making it mandatory to complete an EIA and have it distributed 120 days in advance of Board presentation -- in accordance w/the Bank's environmental policy -- which also respects the Pelosi Amendment.

Issue e) The Bank is "buying in" to the TOR for the EIA as it is viewed as best to have one umbrella EIA and recommendations for all to follow.

**7. Uganda: IDA - Road Development Program (formerly First Roads Sector)**

Projected IDA Funding: \$290 million  
Projected Total Cost: \$750 million  
Tentative Board Date: July 1999  
Stage: Negotiations were scheduled for May 1999  
World Bank EA Category: **B**  
Project ID: UGPE2970  
Project first entered: May 1998  
Entry last updated: April 1999

Description: The project will (a) support institutional strengthening and capacity building; (b) improve the classified road network through pavement strengthening; (c) rehabilitate the classified road network; (d) maintain of existing roads; (e) construct traffic terminals in Kampala; and (f) provide technical assistance. Parallel financing is expected from Germany and EU.

Issues: USAID/Uganda has general concerns regarding rehabilitation and maintenance of roads -- beyond direct the environmental impacts. The Project Information Document and Environmental Data Sheets are not yet available for the First Roads Sector project, so it difficult to be specific in stating the potential for cumulative and indirect impacts. For example, the project could cause increased migration along rehabilitated roads, resulting in increased deforestation and other environmental impacts that go along with increased human presence. The project should undergo an environmental review (and if necessary an EA) *prior* to final design, so that *actual* alternatives can be analyzed before commitments to rehabilitate specific portions are made. The EA should also be shared with the public and donors (for such a large project that seems reasonable) [USAID/Uganda email, April 1998].

Status: While World Bank staff understands USAID's concerns, in the suggested report there are number of outdated statements. The position of the project is quite different today than described by USAID's office (messages from April 1998 and June 1998). World Bank staff is very concerned on the issue. The project not only envisaged an EIA for the each of the physical components of the program, but has also carried out very detailed Sector Environment Policy and Management Studies as well as a Social Impact Assessments for each of the roads included in the program

1. Regarding the employment of the environmental specialist, this position was included in the staffing list of RAFU and Uganda government accepted the requirement. The actual employment will be effected as soon as the present evaluation of the candidates for

various positions for RAFU middle-management staffing is completed. The credit is expected to be effective by November 1999, by which date the position will be filled.

2. The project did take into consideration not only the employment of such specialist, but also supports establishment of an environmental/social unit in the Ministry / RAFU, as recommended by the consultants EUROCONSULT, on the environment sector. All reports produced for the sector study have been copied to USAID's Kampala office. The final report was issued on March 30, 1999 and copied to USAID's Kampala office, NEMA and WFA. The consultants will also review and suggest improvement of resettlement and land composition policy.

3. The Bank financed Roads Development Program, RDP, is a \$295 million APL type lending instrument and will support improving 5 major roads (bitumen overlay), upgrading 300 km of feeder roads to the standard classified road network, and rehabilitate about 1000 km of feeder roads. The program will be implemented over 7 years and in 4 phases, each to be implemented when and if the designed triggers are fulfilled. The Bank, the borrower and other participating donors carried out pre-appraisal and appraisal missions in June and November 1999, and have fully appraised the all roads except for the feeder roads which is underway. Our Aide Memoires describing all steps of the appraisals have been shared with all donors, the shareholder community in Uganda, and other major international financing agencies( AFDF, NDF, NORAD , etc.) Internationally recruited consultants have carried out the feasibility studies for the selected roads and are completing the detailed designs for the first stage of the Program, now under consideration. As an integral part of the process, both EIA and SIA (Social Impact Statement) have been carried out for the selected 5 roads and draft reports have been received by the Bank in January 1999 and commented have been provided accordingly. The final EIA and SIA reports, incorporating our comments, were received in March 1999. Copies of them were sent to the Bank's PIC, and are available for public review, as well as the PID of the Program and the Phase I project. [World Bank Email, 5/11/99]

[From the June 1998 report] Comments were forwarded to Bank staff and USAID/Uganda met with them in Uganda and reported that the project is in the process of doing the EAs. They have developed a list of possible road rehabilitation projects, none of which are final, and are waiting on other reports, including the EAs. If the EA finds significant impacts, they will choose a different alternative. USAID/Uganda plans to meet with the environmental consultants when they come to Uganda and discuss road rehabilitation and EA content. USAID/Uganda is working with the team doing an evaluation on the Rural Feeder Roads project here. A substantial amount of road rehabilitation is occurring and environmental issues have arisen. For example a rehabilitated road adjacent to a protected forest reportedly

has increased illegal timber cutting. USAID/Uganda is generally satisfied with progress on with environmental aspects of this project, and welcomes the chance to get involved, even peripherally.  
[USAID/Uganda email 6/29/98]

**8. Zimbabwe: IDA - Local Government Capital Development**

Projected IDA Funding: \$ 30 million  
Projected Total Cost: \$ 60 million  
Tentative Board Date: May 2000  
Stage: Project preparation is underway.  
World Bank EA Category: **B**  
Project ID: ZMPE3306  
Project first entered: May 1998  
Entry last updated: April 1999

Description: The project will provide infrastructure financing and capacity-building support for local governments, including rural and urban district councils. Environmental Assessment Category B.

Issues: USAID/Zimbabwe reported that, though there is not much information on which to comment, if the project is going to finance infrastructure, it will qualify as a Environmental Assessment Category A project, not B as stated. [USAID/Zimbabwe Email 3/30/98]

USAID/Zimbabwe suggests that the project should include strengthening of environmental units of local governments. In Zimbabwe, at the moment, knowledge on environmental reviews is very limited and restricted to the Department of Natural Resources in the Ministry of Mines, Environment and Tourism. It is virtually absent within local authorities. USAID/Zimbabwe does not have any experiences with local governments requiring environmental reviews for any projects. Local governments don't have any mechanisms for screening projects for environmental reviews. The Zimbabwe EIA Policy placed this function within the Department of Natural Resources, who at the moment have severe capacity constraints. It might be necessary for the project to set up a mechanism for environmental reviews for its subprojects. [USAID/Zimbabwe Email 5/29/98].

Status: World Bank staff responded that USAID/Zimbabwe is quite correct that information is limited as we are at the initial stage of agreement with the Government on project design. However, we have agreed in principle that this would be a "programmatic" operation under which infrastructure would be financed with proceeds of the IDA credit only if Local Authorities meet strict eligibility criteria.

Two types of Local Authorities (representing all local government in Zimbabwe) would be potentially eligible. First, Rural District Councils (RDCs) would be eligible for District Development Grants (DDGs) as continuation of the current Rural District Council Pilot Capital Development Project. DDGs are small, about US\$100,000 equivalent per RDC per year, and these are approved against meeting all the criteria and procedures laid out in the agreed Operational Manual. Infrastructure projects (e.g., boreholes, small bridges and

the like) are approved as part of the annual investment plan that is approved only if the evaluation presented in the Manual is satisfied. This evaluation includes environmental screening (EA Category B). The main objective of this project is RDC capacity building.

Second, any Local Authority (22 Urban Councils and 57 RDCs) potentially would be eligible to receive "matching" grants for financing of investments that are (a) creditworthy and attract financing from Zimbabwe's capital market and (b) meet all of the evaluation criteria to be determined in a "prospectus" provided to potential investors. These criteria will include screening of environment impact (again Category B). Exact investments will be demand driven by the Local Authorities and evaluated by the capital market. Some investments may be for "social" infrastructure such as school and health building rehabilitation or construction, for which a full EA may not be required. Other investments may be for "economic" infrastructure, such a water supply and sanitation or roads that, depending on their conditions may require a full EA (Category A). In the latter case, an EA would be done, summarized in the prospectus and placed in the public domain.

In summary, current dialogue with the Government indicates that investments partially financed by IDA will be demand driven, subject to strict eligibility and evaluation criteria and very diverse, ranging from small rural projects, to social infrastructure, to large economic infrastructure projects, most or all of which should have a full EA. Thus, the proposed operation would be classified as Category B as an overall operation, but some major infrastructure projects to be financed would be classified as Category A.



**PROJECTS LOCATED IN ASIA AND PACIFIC**

**9. China: IBRD/IDA - Western Poverty Reduction<sup>n</sup>**

Projected IBRD/IDA Funding:\$ 60/100 million  
Projected Total Cost: \$ 334 million  
Tentative Board Date: June 1999  
Stage: Negotiations are underway  
World Bank EA Category: **B**  
Project ID: CNPE46564  
Project first entered: April 1999  
Entry updated: April 1999

Description: The project seeks to reduce absolute poverty through a multisectoral program in an environmentally sustainable rural development that includes upland agriculture, rural infrastructure, social services, voluntary settlement and rural enterprise development.

Issues: This is a grossly miscategorized project, it definitely should have been an environmental assessment category "A" (complete EA) instead of a "B" (limited EA). The project will generate significant environmental and social impacts, and clearly calls for a complete EA. The World Bank's policies on resettlement and environmental procedures call for projects that have significant resettlement, large-scale irrigation, drainage, waterways, flood control, land reclamation, and river basin development aspects to have complete EA (EA category A).

The project has a major voluntary resettlement scheme for an estimated 100,000 poor people currently living in marginal, eroded and mountainous areas of eastern Qinghai. About 26,700 ha of "suitable" land with adequate water resources has been identified in central Qinghai for resettlement. The irrigation development component entails the construction of a 40-meter-high dam and renovation of an existing 8-meter dam; and construction of an irrigation and drainage (wells) system on 26,500 ha in Qinghai.

According to the Project Information Document, the principal environmental issues associated with include land leveling and soil erosion; saline and sodic soils; energy and timber supplies for settlers; livestock management; and land compensation. On soils the PID mentions "the soil in much of the area Qinghai resettlement area is saline and a minor part of it is likely to be sodic as well... Additional work is required to define the severity and extent of the sodic soils." Through field surveys, the bank should make sure that this question is resolved before approval. A full environmental assessment, completed with public consultation, would identify the appropriate alternatives and proper mitigation measures for

developing these less-than-adequate soils.

The PID also mentions: "In the long-run, the development of good water management at the system level and at the field level is the key to avoiding salt problems. The supply of energy for cooking and heating and the demand for timber for construction purposes in Qinghai must be addressed before resettlement occurs. In the absence of adequate supplies there is potential for excessive demand on local timber resources particularly in the adjacent sensitive mountain areas." Again, a complete EA is necessary to resolve these issues.

**10. Cambodia: IDA - Northeast Village Development**  
(formerly Northeast Rural Development)

Projected IDA Funding: \$ 5.0 million  
Projected Total Cost: Unknown  
Tentative Board Date: May 1999  
Stage: Negotiations completed  
World Bank EA Category: **B**  
Project ID: KHPE58841 (formerly KHPE45621)  
Project first entered: January 1997  
Entry updated: April 1999

Description: The learning and innovation credit aims at improving rural livelihoods by piloting innovative approaches to the selection, financing and sustainable operation of rural investment subprojects in select poorer districts of northeast Cambodia as part of a government decentralization initiative.

Issues: This activity will be focused on the provinces of the Northeast which are very sparsely populated and have some of Cambodia's most pristine forests, including a large population of indigenous peoples. An environmental assessment category "C" seems to not fill this need for clearer understanding of potential impacts of investments on the environment [The project had been an EA category C]. For example will roads be a part of this infrastructure investment? If so, what will be the impact on illegal logging, forest degradation, etc. Also, production is listed as an input. There are plans for large-scale plantations of palm oil, rubber, etc., which potentially have major environmental impacts if implemented. [e-mail: USAID/Cambodia 25Nov96]

USAID/Cambodia would like to correct the statement in the World Bank's Environmental Data Sheet for the "North East Rural Development" project that indicated that "this support has already led to adoption by the government significant short and long term policy changes for forestry, whose implementation is being monitored." Substantive policy recommendations in the forestry sector are only now being developed under the auspices of a World Bank Forestry Project. This project is tasked with developing recommendations that will affect forest policy, sustainable forest management, monitoring of illegal logging operations, and the legal environment conducive to sustainable forest resource use in Cambodia. The technical assistance team responsible for the policy recommendations (ARD) is scheduled to complete their assignment by the end of May 1998. Additionally, the statement that "it is expected that it will lead to the adoption by the Government of a National Environmental Action Plan in 1997" should also be amended. An executive summary of the final draft of the National Environmental Action Plan, focusing on 1) forest policy, 2) fisheries and floodplain agriculture in the Tonle Sap region, 3)

coastal fisheries, 4) biodiversity and protected areas, 5) energy and the environment, and 6) urban waste was only recently circulated.

[USAID/Cambodia email: 4/03/98]

Status: The World Bank responded that, having initiated a major effort on forest/logging policy in Cambodia over the past year, we are familiar with the value of and threats to the natural resources of the North East part of the country.

In fact, the proposed NE Rural Development Project will focus on raising incomes of poor farming households mainly in the Mekong river valley, from Kompong Cham up to Stung Treng, rather than in the two very sparsely populated, highland provinces of the northeast (Ratanakiri, Mondulokiri) that USAID/Cambodia probably has in mind.

The project would not include any large-scale plantation development. It would finance subprojects for the improvement of small-scale crop farming and livestock raising and possibly some non-farm enterprise development.

The project would help repair some of the roads and other basic infrastructure in the area, which as USAID/Cambodia knows, has received virtually no public investment or maintenance for nearly 30 years, but would not get into new road or highway construction. Thus, it would not be opening up forest land for commercial logging, and would help discourage illegal tree felling by local residents by improving alternative income earning opportunities in agricultural and similar activities.

By helping to establish village-based organizations for community development and by strengthening local government capacities for basic land use planning, the project would help pave the way for a possible GEF-supported natural resource management/ biodiversity conservation project in the NE of Cambodia. This possible GEF project would include the watershed areas of the three Mekong tributaries reportedly being considered for hydropower development by the MRC as well as critical riverine and wetland areas in the Mekong valley proposed as a RAMSAR site.

Thus, the proposed RDP does not raise any significant environmental issues but, rather, helps develop local capacities and willingness to prevent them. Its environmental category rating will be decided at the concept review stage (February 24). [E-mail: World Bank 18Feb97]

[The project is an EA category B instead of a C.]

**11. Cambodia: IDA - Road Rehabilitation<sup>n</sup>**

Projected IDA Funding:	\$ 45.3 million
Projected Total Cost:	Unknown
Tentative Board Date:	March 1999
Stage:	Approval
World Bank EA Category:	<b>B</b>
Project ID:	KHPA4030
] Project first entered:	March 1999
Entry updated:	April 1999

Description: The project will include (a) rehabilitation of national and urban priority roads; (b) development of road management and sector policy; and (c) restoration of historical bridges. An IDA advance of US\$ 350,000 has been approved.

Issues: The mitigation measures proposed under the environment management action plan to: 1) control air and noise pollution during construction phases of the project; and 2) minimize impacts on historical bridges and trees by maintaining the current road alignment appear to be more than adequate. There is, however, some concern with issues associated with the maintenance of roads. While donors, including USAID, have invested millions of dollars in road programs during the past several years, the Royal Government of Cambodia has done little to protect these investments through an operable maintenance program. The Ministry of Public Works and Transportation (MPWT) has requested maintenance funds on numerous occasions. The requests have been favorably received by lawmakers, but a budget has yet to be provided to enable implementation on even the smallest scale.

The USAID-funded reconstruction of National Highway #4 exemplifies this concern. The reconstruction work on the road was not followed up with routine maintenance to prevent water damage, and the formation of potholes. In the two years since reconstruction, not even labor-intensive work was performed to clear and clean draining channels and culverts.

This lack of maintenance had been noted previously. USAID, in 1995, invested in a rural roads "maintenance" program which, in fact, was a complete reconstruction of the same 500 kilometers of road that had been constructed in the northwest part of the country in 1992-1993.

Maintenance is a serious consideration. The MPWT has been requesting donors to contribute to a road maintenance fund for a considerable period of time, but has yet to be successful in its efforts. Donors, including the World Bank, that plan to invest in infrastructure, especially roads, should consider building funds into the program to perform the required maintenance work needed to safeguard public

investments. Increasing the MPWT's capacity to perform road maintenance work is insufficient without a corresponding means of obtaining an implementing budget allocation. [USAID/Cambodia email: 3/23/99]

Status: The points on road maintenance are well taken. Actually the project will complement the action of other donors on the road maintenance front on three accounts:

- a) strengthen the quality of MPWT maintenance operations through training and provision of adequate equipment.
- b) testing and development of small scale contractors through maintenance of urban roads in Phnom Penh and Sihanoukville.
- c) setting up of a Road Transport Policy that will address, inter alia, the sustainable financing of road maintenance through user's charges and the right balance between capital investment and maintenance expenses.

The points above were clearly raised and discussed during the Project Informational Briefing held on May 6 in Phnom Penh and to which the donor community was invited. We are looking forward to working closely with all donors, and USAID in particular, to improve the quality and sustainability of the road transport in Cambodia. MPWT plans to invite all stakeholders, including donors, to share their views through three formal workshops that will be organized over the project implementation. [WB email: 5/10/99]

**12. Indonesia: IBRD - Semarang Flood Control**

Projected IBRD Funding: \$ 75 million  
Projected Total Cost: \$120 million  
Tentative Board Date: Unknown  
Stage: Preparation studies commenced in October 1998 with completion scheduled for August 1999. Preappraisal mission is scheduled for November 1999.

World Bank EA Category: **To be determined.**  
Project ID: IDPA42542  
Project first entered: December 1996  
Entry updated: April 1998

Description: The aim of the project is to mitigate flood damages to areas located east and west of Semarang in Central Java. The project will finance flood protection works and related studies for possible future investments and introduce a cost recovery policy for such works. Preparation studies commenced in October 1998 with completion scheduled for August 1999

Issues: The purpose of this project is to reduce flood damage to public infrastructure, industrial areas and agricultural lands and commercial urban areas through the construction of new floodways and rehabilitation of existing ones which are not suitable for the current volume of water that needs to be transported to the sea. Construction will be implemented in the middle of the urban area (East and West Semarang). Population density in the Semarang area is very high and is likely that this program will have socio-economic problems.

The Semarang Flood Control Project needs to have a full environmental assessment [category "A"] since this project will involve resettlement of "squatters" living along the river banks. [The World Bank's Operational Directive on Involuntary Resettlement (4.30) states that "the screening process for EA normally classifies a project involving involuntary resettlement as an "A," so that environmental impacts of resettlement can be adequately assessed..."].

Status: The Bank informed USAID that preparation of the project continues, and it is not expected to be completed until early 1998. Several design changes are necessary, partly triggered by the high cost for land acquisition and resettlement. In response to USAID's query, the Bank wishes to inform USAID that the discussion continues in the Bank on whether the EA category for this project should be "A" or "B." However, no firm decision has been made so far. This issue will be addressed by the "core" task team, once the final land acquisition and resettlement requirements are known. This is not expected to be before the end of 1997. [WB fax: 23Jan97] The project's EA category is still to be determined as of April 1999.

**13. Indonesia: IBRD - Decentralized Agricultural and Forestry Extension<sup>n</sup>**

Projected IBRD Funding: \$ 18 million  
Projected Total Cost: \$ 23 million  
Tentative Board Date: August 1999  
Stage: Appraisal mission is in the field.  
World Bank EA Category: C  
Project ID: IDPE3983  
Project first entered: March 1999  
Entry updated: April 1999  
Task Manager: Dely Gapasin (458-2363)

Description: The project will improve the provision of extension support services at the district level through an operational, integrated, farmer and agribusiness-oriented agricultural and forestry extension system which would promote adoption of environmentally sustainable farming practices and increase farmers' income. The project will enhance farmers' participation and capacity to determine the extension program and priorities, strengthen the integrated district level agricultural and forestry extension system and extension staff capacity, and provide central extension and project management support.

Issues: The project would promote farming practices which are environmentally sound, such as conservation farming in upland areas to integrate trees in the farming system; use of IPM (integrated pest management) approaches in rice and secondary crops; use of soil analysis as basis for fertilizer recommendation. However, since the project mixes agriculture and forestry or has agroforestry activities, this always has an environmental implication. We need to carefully assess the environmental implication during the process and if there is a need we need to conduct an IEE (initial environmental examination) before we continue the program. The project should be classified an EA category "B." [USAID/Indonesia email, 03/99]

Status: These comments have been conveyed to World Bank staff.



**14. Indonesia: IBRD/GEF - Maluku Conservation and Natural Resources Management<sup>n</sup>**

Projected IBRD/GEF Funding:\$2.0/6.0 million  
Projected Total Cost: \$10.6 million  
Tentative Board Date: 1999  
Stage: Project preparation has been delayed due to civil unrest in Maluku.  
World Bank EA Category: **B**  
Project ID: IDPE37095  
Project first entered: March 1999  
Entry updated: April 1999  
Task Manager: Sari Soderstrom 473-8726

Description: The project will include (a) environmental performance-based Kabupaten block grants; (b) on-site management of priority protected areas; (c) protected-areas systems establishment; (d) biodiversity monitoring; (e) an environmental public awareness campaign; and (f) independent monitoring.

Issues: This program is to develop and test a framework for alternative methods to establish and manage protected terrestrial and marine areas in Indonesia, while promoting poverty reduction in remote outer island like in South East Maluku. Block grants are given to mitigate the pressure on natural resources and protected areas and reduce unsustainable harvesting of endangered species by improving village welfare via provision of financing alternative income generating activities. Investments into basic infrastructure and field equipment are also planned. From the project description, it appears that this is a complex project. The project may have adverse environmental impacts therefore environmental analysis (at a minimum) is required before project implementation. Especially if resettlement is expected, the project should be reclassified as an EA category "A". [USAID/Indonesia email, 03/99]

Status: These comments have been conveyed to the World Bank.

**15. Lao PDR: World Bank Group - Nam Theun II Hydropower**

Projected World Bank Funding:	Possible partial risk guarantee and an IDA Credit, possible IFC funding.
Projected Total Cost:	1.3 billion
Tentative Board Date:	To be determined
Stage:	Under study
World Bank EA Category:	<b>A</b>
Project ID	LAPE4206
Project first entered:	February 1996
Project information updated:	April 1999

Description: The objectives of the NT2 project are to: (i) generate long-term net revenues and foreign exchange for the Government; (ii) encourage the use of those revenues in support of economic growth and poverty alleviation through investments in rural and human resource development; (iii) fulfill the Government's commitment to supply Thailand with 3000 MW of electricity by 2006; and (iv) link hydropower development with environmental and social objectives (e.g. long-term financing for the NNT watershed, a globally significant biodiversity site). The project also aims to develop a model for public-private partnerships which could stimulate future private sector participation in Lao PDR, a country with limited domestic financing resources.

The NT2 project components are: (i) dam construction, including the dam itself (50-m-high), the power station (900 MW), intake and tunnel, transmission line, downstream channel, and other related infrastructure; (ii) resettlement and community development activities, including public health, in the reservoir and downstream areas; (iii) environmental management and mitigation activities, focusing on reservoir management and water quality, downstream flooding, and downstream biodiversity impacts; (iv) conservation of the NNT watershed, including community development programs; and (v) environmental capacity strengthening, training, and education.

The proposed project involves the construction of a 50-m-high dam, with a 690-MW power plant, on the Nam Theun tributary of the Mekong River. It would create a 450-km<sup>2</sup> reservoir (about one-fourth the size of Yacyretá's reservoir in Argentina and Paraguay, but both have about the same (low) kilowatts per hectare of flooded area ratio). Nam Theun II is being developed by private developers -- a consortium of Australian, French, Italian and Thai companies. The bulk of the financing would come from the private sector, with the government of Lao PDR taking an equity stake of approximately 25%. Virtually all electricity output would be exported to Thailand under an existing memorandum of understanding (for purchase of 3,000 MW) between the two governments.

The project is expected to generate approximately \$35 million per year in revenues to Lao PDR 5 years after completion, increasing to about \$100 million per year in year 10, and leveling off at \$100 million until year 25, when the loan will finally be paid off. It is expected to generate about \$4 billion in aggregate pay out.

Issues: The World Bank Group has asked the government of Lao PDR and private developers to conduct several environmental, social and resettlement studies before it would consider appraising the project. A Project Information Document is available from the Bank, but the project is not listed in the World Bank's Monthly Operational Summary.

Key issues relate to the loss of habitat of high conservation value, economic issues, the social impacts of resettling 950 families, and the hydrological and water quality impacts on two river systems. IUCN recently identified the Nam Theun area as a high priority for conservation. Also, the Global Environmental Facility (GEF) approved a \$5 million Wildlife and Protected Areas Conservation Project in February 1994, listing the Nakai/Nam Theun area as a priority for protection.

The GEF profile of the proposed protected area stated the [Nam Theun 2] hydro project would be a major threat to the protected area's establishment. The proposed reservoir would flood about 80 km<sup>2</sup> of pristine tropical forest and about 370 km<sup>2</sup> of degraded forest due to shifting cultivation. The Nakai/Nam Theun component was recently dropped from the GEF project because of this planned major infrastructure. According to the Bank, however, there is now a general agreement in principle among the power developers that the project will provide funds for the establishment and long-term management of the 3,500-km<sup>2</sup> Nakai Biodiversity Conservation Area (NBCA) which includes approximately 1/3 of the Nakai Plateau. This would also include sustainable development programs for about 1000 families in the protected area. If properly planned, this could be a showcase example for the World Bank on sustainable mitigation for large hydro projects. Attention to planning and implementation of this needed, more so than has currently has been done.

International NGOs (such as the International Rivers Network-IRN) have highlighted economic, resettlement, and biodiversity issues. There is also concern about the cumulative effects of hydropower projects in the relatively undeveloped Mekong basin, which is being developed in the absence of a national energy sector strategy. An IRN-commissioned review of the hydrological data for Nam Theun 2 indicated that the available hydrological data "is not sufficient to fully assess the Nam Theun 2 Hydroelectric Project's viability." Apparently, much of the stream flow data are based on only a seven-year period of rainfall data. Without adequate knowledge of how much water will be available to turn the dam's turbines, investors in the project will expose

themselves to a high risk of less than expected energy production. The potential environmental and social impacts will also be difficult to assess with limited hydrological data.

International NGOs are not in a position to represent locals -- but Laotian NGOs are nearly non-existent. At the request of the World Bank, the Lao PDR government to held public consultations meetings in 1998. Regional criticism comes from Thai NGOs because all the power from the project will be sold to Thailand. UNDP has offered to hold a forum on the project. The World Bank has been asked to present information and coordinate with UNDP.

The project may also undermine an existing bank loan in Lao PDR, Forestry Management and Conservation Project (#Cr.2586.LA). It is also questionable that the bank is spending so much time and funds on preparatory studies for this project without officially listing it in its portfolio of proposed projects. This undermines the Bank's credibility regarding openness.

Status: According to the World Bank's draft Country Assistance Strategy for Lao PDR, the government of Lao PDR has asked the Bank Group to provide financial support for the project through the IFC, and partial risk guarantees from the MIGA. The Bank Group's position is that only on the basis of preparation to acceptable standards would the Bank group appraise the project and subsequently decide whether it can participate in its financing. In particular, the project would have to comply with its policies concerning the environment, resettlement and indigenous peoples.

The 1997 EIA has been completed, but further work on mitigation is required. Not enough effort was put into realistic mitigation, the mitigation plan is not detailed enough, especially regarding the development of a long-range plan to maintain the ecology of the catchment area. The follow aspects of the EIA are inadequate: It is based on very little field data. For example, water quality data is available from the wet season months, when 95 percent of the water flows through the basin. Water quality and waste management issues with the proposed resettlement plan for the people to be resettled adjacent to the reservoir have not been adequately addressed. Hunting and access to the catchment area will be facilitated by the reservoir through the use of boats. The resettlement action plan. The most recent EIA draft is dated May 1997. This was translated into Lao, but the government of Lao PDR has not agreed to release it.

Alternative power generation possibilities, including sites for hydropower development, need to be studied further in a manner acceptable to the Bank, so as to confirm the preliminary findings of the site's economic viability and to place the proposed project within a comprehensive power development strategy. A precondition for Bank

consideration of this project is a public consultation plan, including an open, transparent, participatory process in conducting the studies to satisfy the above Bank concerns. This was done, the plan is questioned because LAO PDR is a communist country. According to the Bank, it has also asked the government to prepare a regional social action plan which would try to anticipate and shape economic and social development in the broader project impact area.

The private developers want Bank support, and have indicated that they would strive to meet the Bank's expectations. Bank staff considered the developer's support for environmental protection of the watershed as enlightened self interest, not altruism. The Bank regarded this as assurance that the developer would comply with such a condition when required by the Bank. However, to date the government of Lao PDR has not agreed to undertake these studies. If the government agrees, precondition studies will be conducted addressing three broad areas of concern: economic impact, analysis of alternatives, and environmental and social impact. The studies have a six-month time frame, but the consultation process may take longer than that. When the studies are completed, the Bank Group will be in a position to appraise the project.

In addition, the Bank reported that it has had a very open dialogue with the NGO community so far. The Bank has stated that its objective is to manage a transparent process for arriving at its decision with regard to this project.

**16. Vietnam: IDA - Mekong Delta Water Resources Development<sup>n</sup>**

Projected IDA Funding:	\$102 million
Projected Total Cost:	\$148 million
Board Date:	May 4, 1999
Stage:	Approved
World Bank EA Category:	<b>B</b>
Project first entered:	April 1999
Project information updated:	April 1999

Description: The Mekong is the 10<sup>th</sup> largest river in the world. This project will support completion of salinity control and water delivery systems, to improve agricultural production and increase rural income in some of the poor regions in the lower Delta. The proposed project would cover five subproject areas in six provinces with a total area of 535,000 ha (14% of the Mekong Delta). Four of the subprojects, South Mang Thit (225,682 ha), Quanlo-Phuonghiep (178,900 ha), Baring-Talim (31,000 ha) and Tiep Nhat (54,000 ha) are in the lower Delta. The Omon-Xano subproject (45,430 ha) is in the middle Delta. Each area is a unique hydraulic unit.

The basic approach to the development of the subprojects in the lower Delta is to prevent salinity intrusion by extending existing dikes and installing about 200 additional sluice gates on canals serving the agricultural areas, together with completion and improvement of existing irrigation systems. The sluice gates would close at low tide, especially in the dry season, to prevent saline tidal flows from entering existing agricultural lands. They would open in periods of high freshwater flow to allow drainage and flushing of contaminants. This would create a year-round fresh water environment to allow an additional crop to be grown in the dry season. Improvement of drainage and inundation in the wet season would secure the second or third crop. Existing canals would be enlarged where necessary and the density of secondary canals would be increased to improve water delivery capacity for irrigation and drainage. Tertiary canals and on-farm systems would be developed.

The Omon-Xano area is above the salinity line and freshwater is available all year round. The main aim of this sub-project would be to improve flood protection and drainage through extending embankments and building sluices, and to improve secondary canals.

Overall, the improved water delivery systems of over 3,000 km of irrigation /drainage canals, embankments and structures would promote agricultural intensification and diversification by providing freshwater and through improved drainage. The project would facilitate rural transport through enhancements in canals, bridges and canal connected rural roads.

The project will also develop a number of deep groundwater wells to provide drinking water to the rural population of the region (about a million people), as mitigation for expected declines in surface water quality.

The project involves resettlement of 1650 families (moving homes), and compensation for 34,000 families expected to lose small parts of their farmland. It has a resettlement budget of \$21 million, to be completely covered by the Government (a problematic practice in some countries, but the GoV appears committed). The Resettlement Action Plan (RAP) appears to have been well-done -- a major improvement over the prior Vietnam Inland Waterways project, which the USG opposed.

Issues: A USG review of the project found that the project's limited environmental assessment inadequately addresses issues of surface and groundwater quality, fishery impacts, nutrition trends with specific reference to protein intake, water-borne diseases and pesticide exposure, and subsidence related to groundwater pumping. Such issues apply not only to the project area, but also to downstream impacts where the fresh water meets the sea.

According to USG interpretation of the Bank's operational policies, the project should be classified as an EA category "A" because of the project's significant resettlement, and large-scale irrigation, drainage, waterways, flood control, land reclamation, and river basin development aspects. The Bank says that it was given a category "B" due to the prior completion of a Mekong Delta Master Plan, which indicated a preference for these projects and included some sort of regional environmental impact assessment.

However, the area has a high international profile for environmental sensitivity, and a paucity of baseline data, as acknowledged by the project's EIA numerous times.

The project does not convert non-agricultural lands, but its essential purpose is to control salinity intrusion and flooding in order to convert a formerly large area of seasonally brackish (salty) wetlands to a freshwater wetland regime. This will enable rice production to go from 1 or 2 crops per year to 2 or 3 crops (the Bank says the third crop will usually not be rice, but other crops with less water demand). This type and scale of land reclamation or conversion can be potentially ecologically significant, with diverse effects - to disease vectors such as mosquitoes carrying Japanese encephalitis and malaria, mangroves, fisheries, waterfowl, etc.

The project EA focuses by sub-project area on the issues of salinity, local hydrology, acidic soils, within-site fisheries economics, and inhibition of transport, without ever looking at the cumulative picture or areas adjacent to the projects that are likely to be

affected.

A USG interagency review (by NOAA, EPA, USAID, State, Treasury) of the EA and related documentation concluded that the environmental studies were too narrow in scope and suffer from a serious lack of baseline data on a variety of potentially serious issues:

- a) There was no apparent consideration of development alternatives to the project, other than moving sluice gates from one location to another.
- b) There are reports that some farmers prefer to and are already illegally pumping saline groundwater into some project areas in order to grow more lucrative shrimp, rather than rice. The sustainability of this practice is uncertain. The Bank assumes that this was occurring in areas that had been excluded from the project, as they expressly redesigned it to avoid overlap with shrimp production areas.
- c) A variety of potentially serious issues were not even considered, such as: human health impacts of several different types, delta subsidence, changes in Mekong flows due to upstream development or water sharing agreements to be worked out under a forthcoming WB/GEF project, nutritional and other socio-economic impacts of changes in common property regimes such as subsistence fisheries, gender and economic aspects of farmer's O&M responsibilities, etc.
- d) A variety of other issues were very briefly mentioned but dismissed without basic data collection: water quality, increased use of pesticides and fertilizer use, sediment flows, fisheries, protected areas, etc.
- e) The EA and other studies seem to make widely conflicting statements about a variety of issues, sometimes in adjacent sentences (e.g., magnitude of increases in pesticide and fertilizer usage; contamination/ isolation of deep aquifers).
- f) The mitigation plan suggests expanding a small existing integrated pest management program, but no funding was provided. The Bank promised to discuss this with the GoV in relation to a separate agriculture Bank project.
- g) Monitoring components are inadequate (total of \$300k). The Bank promised to increase the monitoring program, especially regarding fisheries, nutrition, water quality, and disease vectors.

Developed countries have realized that while widely practiced in the past, conversion of wetland ecosystems, whether from wet to dry or from brackish to freshwater regimes, is a major ecological



sustainability issue. The United States is now spending billions of dollars to undo the billions it spent on such works in Florida, Louisiana, Texas, California, etc. A cavalier attitude toward such delta modification has proven to be catastrophic in Senegal. It should not be taken lightly or dismissed as minor because sufficient data is lacking on the Mekong delta.

The U.S. believes this project should have had a far more comprehensive regional/sectoral environmental assessment, with baseline data collection, and including long-term sustainability issues. This should include an appropriate array of ecologists and social impact specialists, not just engineers and economists.

Documents reviewed:

- a) Human health implications, by member of World Bank Panel of Experts on tropical health and water projects.
- b) Hydrological study by NOAA.
- c) Fisheries study, by USAID.
- d) Sub-project level EIAs
- e) Rural drinking water supply study, including limited aspects of groundwater..

**PROJECTS LOCATED IN EUROPE AND CENTRAL ASIA**

**17. Ukraine: EBRD - Khmel'nitsky 2 and Rivne 4 (K2R4)  
Completion<sup>n</sup>**

Projected EBRD Funding: \$190 million (ECU\$175 million)  
Projected Total Cost: \$1.725 billion (ECU\$1.590 billion)  
Tentative EBRD Board Date: Unknown  
Stage: Final review  
EBRD EA Category: **A**  
Project ID: Unknown  
Project first entered: April 1999  
Entry updated: April 1999

Description: The EBRD's objectives would be to:

- a) increase nuclear safety in Ukraine by facilitating closure of the Chernobyl nuclear power plant and strengthening the Nuclear Regulatory Authority; and
- b) stimulate reform and privatization of the Ukrainian power sector.

The financing of K2R4 would support Ukraine's market-oriented reforms, in particular the privatization and financial strengthening of the electricity sector. In turn, this would advance economic transition. Successful implementation of this project would also provide an internationally acceptable benchmark for safety levels of nuclear power units with VVER 1000 type reactors

The Least-Cost Electric Power System Development Analysis was completed in May 1998, and EBRD's Project Summary Document in October 1998.

Environmental summary (from the Project Summary Document on EBRD's website)

The EIAs were made publicly available in the end of 1998 by the project sponsor. Environmental Action Plans (EAPs) for the two NPPs are being developed. The EAPs will be covenanted in the project's loan documentation.

The EIAs set out the policy, legal and administrative framework, details of the existing environments, details of the proposed project including arrangements for radiological protection, and the potential environmental impacts associated with the project, taking into account both normal operation and abnormal conditions. Measures are identified to mitigate possible environmental and radiological impacts.

Assessments of the impacts of predicted discharges from both K2 and R4 during normal operation indicate that the annual radiation dose which would be received by the most exposed member of the public would be substantially less than 1 per cent of the regulatory limit set by Ukrainian regulations. These regulations are consistent with those recommended by the International Commission on Radiological Protection (ICRP). The annual radiation dose to the population residing within 30km of the NPPs, taking into account the other operational nuclear reactors at the Khmelnitsky and Rivne sites, and assuming normal operations, would also be well within internationally accepted radiological protection criteria.

The EA also covers transport of fuel, consideration of a worst-case design-basis accident, occupational safety, and emergency planning. Regulatory documentation dealing with radioactive waste management is currently in preparation together with a national policy on radioactive waste management.

Spent fuel will continue to be stored at both sites for significant periods following the initial three-year decay period, which is customary prior to fuel reprocessing. Assuming that current proposals for the capacity of the spent fuel ponds at both sites are realized, no significant environmental or radiological impacts are anticipated. A package of regulatory documents dealing with decommissioning is currently in preparation. Prior to commissioning of the reactors, the operator will need to have undertaken an assessment of the different strategies for decommissioning.

Environmental impacts which are not related to radiation exposure may arise during completion and operation of the NPPs. The effects of construction impacts would be reduced due to the 3km sanitary protection zone around the NPPs. Such impacts would be of little significance beyond 3km from the NPPs.

The operation of both K2 and R4 would result in increased water requirements at both NPP sites. The exact requirements and the extent to which they can be met from surface or artesian sources require further assessment at both sites.

Public consultation: Public consultation was undertaken at two stages during the process of preparing the EIAs. Scoping meetings were held at three locations in Ukraine at the end of 1996. The outcome of these meetings was taken into account when defining the terms of reference for the EIAs. A further meeting, which was held in Kiev in September 1997, provided information that was taken into account in the preparation of the EIAs. The public was invited to provide comment on the EIAs, which were made publicly available during the third quarter of 1998. Details of the public consultation process will be made available by Energoatom.

Alternatives: The EIA methodology required comparison to be made between the completion and operation of K2 and R4 and the "no change option." The latter assumed that the operation of two of the units at the Chernobyl NPP site would continue following completion of an upgrading and safety program and that K2 and R4 would not be completed. This comparison has indicated that routine discharges of radioactivity from two units at Chernobyl would significantly exceed those from the operation of K2 and R4. There would also be an increased risk of a catastrophic accident as a result of the continued operation of Chernobyl. This would lead to widespread radioactive contamination. Work is also being undertaken on an initial assessment of the environmental impacts that would be associated with a thermal power sector program in Ukraine, which assumes closure of Chernobyl without the completion of K2 and R4.

Issues: The Bank Information Center and its European partners have raised the following concerns.

Safety problems: The reactors at K2/R4 are far below present safety standards and would not be allowed to operate in any western country. Furthermore, Energoatom (Ukraine's state-owned nuclear energy company) is planning to begin operating these reactors before implementation of all safety measures; the company will only correct some of the known safety problems at the first refueling. Therefore, even the designed (but unsatisfactory) safety level will only be reached after three years of operation. These safety problems are compounded by the fact that Ukrainian workers are not getting their salaries.

Economic evaluation of the project: One of the EBRD's conditions for its involvement is that the project must be the least-cost option. In 1997, the EBRD contracted an independent Panel of Experts to review the economics of the project. The Panel concluded that: "...K2/R4 are not economic. Completing these reactors would not represent the most productive use of 1 billion USD at this time." At the time of this conclusion, the cost of completion was expected to be 1.2 billion USD; that figure has now risen to 1.72 billion USD.

The Panel found that power needs in Ukraine are declining, and that these needs could best be met through conservation and demand-side management, as several studies have shown. Recent developments in Ukraine have confirmed the Panel's findings. In 1997, energy consumption in the country declined by an additional 7%, and in 1998 by another 3%. There is a significant over-capacity in electricity generation in Ukraine, with overall installed capacity at 53.9 GW in 1997 (mainly in the base load sources). Even without the Chernobyl nuclear power plant, this is about twice the capacity needed to cover current peak electricity demand, which in 1997 was 27.2 GW. In addition to this, there was a significant decrease in gas prices on

the world market, making gas-based alternatives cheaper than in previous analyses. Meanwhile, the price of atomic waste storage increased dramatically (Russian prices for storing Ukrainian waste rose by more than 20% since December 1998). All of these factors have an impact on the least-cost analyses. In addition, a recent confidential EIB study says: "A substantial degree of uncertainty attaches to a number of key parameters of the project, notably - but not exclusively - the demand of electric power and project costs, resulting in high financial and economic risk relative to the [energy] sector ..."

Non-payment issue Ukraine is currently in a critical financial situation. This loan could make the situation even worse, especially as cost overruns and construction delays are highly probable. The current rate of monetary payment for energy in Ukraine is very low (16.4 %), and payment for electricity is even lower. According to G. Sazonov, monetary payment for electricity is now 4.2-4.5%, while barter payments make up 52-53% of the total bills. This means that over 40% of all electricity is presently going unpaid. Furthermore, recent experience has shown that as electricity prices increase due to tariff reform, a lower collection ratio results. So, despite higher tariffs, the total income to generators and distributors will remain constant at best, and is more likely to decrease in the foreseeable future. It is therefore highly questionable whether the Ukraine will be able to repay the loan in the foreseeable future.

Public opinion in Ukraine: The great majority of residents in the Rivne and Khmelnytsky region oppose K2/R4. A survey done in 1998 indicates that 94 % of respondents answered "No" to the question: "Do you agree with the completion of new units at the Rivne and Khmelnytsky NPPs?" Yet Ukrainian authorities stated openly that they were going to ignore public opinion on this issue. Furthermore, they are attempting to silence the debate about the K2/R4 project by using coercion and force to intimidate the project's critics. Incidents involving the Ukrainian Secret Service have raised serious concerns regarding human rights violations against those who oppose K2/R4.

Where the money should go/Alternatives to K2/R4 The EBRD, the G-7 governments, and other international financial institutions should stop working on the K2/R4 project. They should instead finance the gas turbines project and other energy sources proposed by Ukraine when the MoU was under negotiation. The Ukrainian energy sector has a problem with peak load capacity, a problem which can be solved not by nuclear plants, but rather by gas power plants. In addition to this, the Ukrainian State Committee for Energy Conservation has prepared a list of 66 alternative energy projects, which would more than compensate for the 2000 MW presently produced by Chernobyl. All of the proposed alternative projects will provide equal or greater possibilities for use of Western technologies.

**PROJECTS LOCATED IN LATIN AMERICA AND THE CARIBBEAN**

**18. Bolivia: IDB/WB - Export Corridors: Santa Cruz-Puerto Suárez Highway**

Projected IDB Funding: \$134 million  
Projected WB/IDA Funding: \$ 65 million  
Projected Total Cost: Unknown  
Tentative IDB Board Date: To be determined  
Tentative WB Board Date: May 2001  
Stage: Preparation stage  
IDB EA Category: **Full EIA and Social Impact**  
WB EA Category: **B**  
Project ID: B0036  
Project first entered: January 1997  
Entry updated: March 1999

Description: IDB: The goal of this proposed project is to increase the competitiveness of Bolivian products in international markets by decreasing transportation costs in the country and assuring that the Santa Cruz-Puerto Suárez Highway remains open and passable throughout the year. The program will include works, studies, and an environmental impact mitigation component.

WB/IDA: The credit will finance construction of the San José-Puerto Suárez road, a sector of about 400 km of the export corridor Santa Cruz-Puerto Suárez. Identification mission is scheduled for fiscal year 2000.

Issues: USAID/Bolivia understands that this project aims at improving an existing road, that it has major economic and development significance, and that it will have an environmental impact mitigation component. It is not the direct impacts of the road itself that are of concern, but rather the indirect ones. The project description itself alludes to those potential indirect impacts when it implies that this is a natural area for population expansion.

Specifically, USAID/Bolivia wants to make sure that the improved road will not accelerate haphazard colonization and deforestation, in particular into areas that are 1) inappropriate for long-term agricultural production, or 2) of high biological value (e.g., the Tucavaca Valley; while much of this is already slated for "traditional" development, at least portions of this valley need to be protected -- see RAP Working Paper No. 4, "The Lowland Dry Forests of Santa Cruz, Bolivia: A Global Conservation Priority," July 1993. An improved road would almost certainly put this area under increased conversion pressure, and maybe that "protection" issue should be considered and resolved before the road work would begin).

There's also the issue of what impact the road would have on the Bolivian Pantanal. According to biologist Ted Parker, "Although worldwide attention has been focused on conservation efforts in Brazil, the Bolivian Pantanal may be of even greater biological importance due to the very extensive tracts of undisturbed dry forest and cerrado..." (p. 52). He goes on to flag his fears of "an increasing emphasis on mining (e.g., Cerro Mutun), the export of natural gas, and harvest of timber in the dry forests to the northwest" (p. 56) -- the kind of things this project will presumably encourage. Cerro Mutun is just to the south of Puerto Suárez.

USAID/Bolivia would like to see rigorous enforcement of authoritative land-use planning before the road improvements begin. The improved road would also potentially move more people relatively close to the Kaa Iya del Gran Chaco National Park (where USAID supports work with WCS and the Izoceño indigenous people). There should be some guarantees that it would not encourage encroachment into the park (in particular with cattle ranches, logging of quebracho, or irrigated agriculture). Some increased protection for the northern border of the park linked to the road improvement might also make sense.

The road is a priority development project, and USAID is not suggesting that it should not go ahead. But it suggests it should be classified as an IDB EA Category 4, or World Bank EA Category A -- "operations that may have significant negative impacts on the environment and will require a detailed environmental assessment." This activity would also explore the feasibility of other transportation infrastructure improvements in this environmentally fragile area, and it would be a good idea to make sure everyone knows, up front, how important the question of environmental impact is when doing this kind of planning. Participation and consultation will be important during the EA process [USAID realizes that IDB has changed its EA classification system to eliminate numbered category in March 1997]. [e-mail: USAID/Bolivia 12/05/96]

The local Wildlife Conservation Society (WCS) representative, STRONGLY endorsed USAID/Bolivia's recommendation -- that a full impact assessment should be required.

Not only are the areas flagged above of critical conservation importance, but there is also the Chiquitano dry tropical forest that goes from the north to the south of the proposed road. This is also "important and highly threatened habitat," according to the WCS. Many of these areas have already been flagged as being of critical conservation importance in the Santa Cruz land use plan (the PLUS, done with German and World Bank funding). WCS echoed USAID concerns: These areas should have some concrete protection before the road improvement. In addition, USAID/Bolivia strongly recommends that an

anthropologist be on the team. The reason is the project is likely to affect several important indigenous peoples groups, i.e., the Izoceños and Chiquitanos (USAID/Bolivia is working with both groups under its forestry and biodiversity conservation work), as well as the Ayoreos and perhaps others.

USAID/Bolivia recommends using the project as a vehicle to ensure that these areas are protected, i.e., build into the project, on the basis of the EA, resources to mitigate the indirect impacts of the road construction. [e-mail: USAID/Bolivia 12/12/96]

The project would also give a push for the Hidrovía Waterway -- the paved road would go right to its door, so to speak, and that would make agricultural production and logging that much more profitable, over a much bigger area. The pressures from those sectors for the Hidrovía would therefore increase substantially; all the more reason to do some serious thinking before the road gets improved.

Status These comments have been conveyed to IDB staff, which responded that since April 1997, IDB has not used environmental classification by category for its projects, but determines on a case-by-case basis the scope of the EIA required. Particularly for this project, a full EIA was required which corresponded to the earlier category 3 classification. For the Santa Cruz - San José segment, a consulting firm is preparing the detailed engineering design and the detailed environmental assessment. For the San José - Puerto Suárez segment, this firm is preparing the EIA and feasibility study. Although slowly, the studies are proceeding forward. The draft of the EIA has been presented and the final report (feasibility studies and engineering designs) is expected for April, 1999. The IDB staff plans to commission additional environmental and social impact studies for the corridor, which would not preclude the presentation and acceptance of the designs from the consulting firm for the Pailón-San José segment. [IDB March 1999]

The World Bank responded that regarding the Santa Cruz-Puerto Suárez Road, including the San José-Puerto Suárez segment, which is the one in the World Bank's portfolio. IDB plans to finance the segment Pailon-San José, which together with the existing Santa Cruz-Pailon will complete the Santa Cruz-Puerto Suárez Road.

Concerning the section San José-Puerto Suárez, the World Bank has not yet started the project preparation, pending on the results of the prefeasibility study financed by IDB, as USAID rightly said in its message, and the approval of our budget for fiscal year 2000, which starts on July 1, 1999.

With respect to USAID's concerns about the environmental assessment categorization for the project, the categorization of "B" is



provisional and it will not be definitive until the Project Concept Document Review, when most probably will be changed to "A". In any case, the World Bank plans to conduct a full EA, as we have done with the Abapo-Camiri Road, now in the final stage of preparation. The full EA will be performed separately from the one for Pailon-San José, to be prepared by IDB, but in close coordination with it.

Finally, our tentative Board Date is now May 2001, to give time enough to complete and discuss the engineering design and the EA. It could be advanced if both are completed before expected.

World Bank staff will be also happy to discuss the environmental issues with USAID at the early stages of project preparation. [World Bank email, 4/19/99]

**19. Dominican Republic: IBRD/IDB - Power Market Development/ San Pedro de Macoris Power Plant**

Projected IBRD Funding: \$110 million  
Projected IDB Funding: \$ 70 million  
Projected Private Funding: \$155 million  
Projected Total Cost: \$375 - 400 million  
Tentative WB Board Date: Unknown  
Stage: Project preparation is underway.  
Japanese Grant Facility is funding project preparation studies.

World Bank EA Category: **A**  
IDB EA Category: **3**  
WB Project ID Number: DO-PAO-7011/6DOMPA035  
IDB Project ID Number: DR0133 (formerly DR0080)  
Project first entered: July 1993  
Entry last updated: April 1999

Description: The proposed World Bank (formerly named Power Transmission or Power II) project includes:

The overall objective is to support power sector reform by establishing a competitive bulk supply market for electricity. Specifically, the project seeks to lift transmission constraints that hinder open access of publicly as well as privately owned power generators and to support

- a) installation of an Energy Control Center (ECC) and Financial Settlement Center;
- b) strengthening and expansion of the Interconnected Transmission System; and
- c) providing technical assistance.

The proposed IDB project, San Macoris Power Plant (DR0133), was formerly called the Power Sector Hybrid Program (DR0080). The San Pedro de Macoris Power Plant will be a combined-cycle power plant, consisting of three oil-fired units of 100 MW with total net generating capacity of 296 MW. The project is located at an undeveloped site on the west bank of the Higuamo River approximately 8 km from the town of San Pedro de Macoris along the south-central coast of the Dominican Republic. Each low nitrogen oxide gas turbine will be coupled with a heat recovery steam generator and a steam turbine. Cooling towers will be used, with makeup water coming from onsite wells, offsite wells and from the Higuamo River, which is located immediately east of the project site. Plant process water will be obtained from on-site groundwater wells. Cooling water and treated process waste water from the project will be discharged to the Higuamo

River.

The project will include the construction of mooring and fuel unloading facilities near the mouth of the Higuamo River. A fuel pipeline will be constructed to connect the power plant and fuel unloading facility.

Issues: USAID/Dominican Republic recommended that the project have an adequate assessment of the potential for air emissions, water and marine contamination, and landscape contamination. [#05649 06Jul93]. This project should fit into a general integrated resource planning strategy for the Dominican Republic. Serious adverse environmental impacts from the site location and possible resettlement include effects on sensitive marine and coastal ecosystems.

The government of the Dominican Republic had suggested 1) the Samaná Bay, one of the largest winter breeding areas for humpback whales in the Caribbean; and 2) the Luperón Bay, the last known breeding area for the West Indian manatee. These two sites have apparently been eliminated as alternatives.

Project-specific EAs should be conducted for power plant construction with careful consideration given to site location of new plants to avoid placement in environmentally sensitive areas such as Samaná Bay and Luperon Bay. The energy law designed to establish the legal and regulatory framework for privatization of the electrical energy sector is still languishing in congress after three years. However, there are indications that the recently elected government will "legally" proceed to privatize the CDE and establish the regulatory framework, without the energy law. The Mission still plans to help the government of the Dominican Republic establish internationally accepted environmental norms and standards for electric power generation and distribution under the USAID/DR Electrical Energy Restructuring Project. The project was recently redesigned to place more emphasis on commercially feasibly renewable energy options for rural electrification. The major environmental concerns on proposed conventional power projects are pollution (especially in environmentally sensitive areas), institutional weaknesses and ability to enforce new environmental regulations. USAID/DR suggests that prior to construction of new power plants, environmental regulations should be in place and a regulatory body established to implement and enforce the regulations. USAID/DR would also like for IDB and IBRD to support the inclusion of environmentally sound renewable energy into a National Energy Plan." [e-mail: USAID/Dominican Republic 05Dec96]

Status: IDB responded that:

1. The site: Luperon and Samana were discarded as possible sites in studies done in 1993 and 1994. The February 1994 study only

recommended Azua, Bacahica and San Pedro de Macoris as sites. Afterward, the first two were discarded and since 1994, IDB has only been discussing sites in the San Pedro de Macoris area.

2. Environmental Regulations: USAID has had the leadership in the area of environmental issues. Recently, USAID hired a consultancy to do environmental audits of the electricity distribution system, prior to privatization and preliminary audits on power generation. Also, to prepare an Environmental Management Plan and basic regulations, and to develop a plan to strengthen the regulatory capacity of the government. The regulation of the sector would be done through the Electricity Superintendency, an agency that is expected to be created via a decree, in case the Electricity Sector Law is not approved. The project's schedule is pending results of ongoing discussions with the government, which is currently undergoing a power restructuring. [e-mail: IDB, 12May97]

In February 1996, IDB responded that the project has been delayed, however, project-specific EIA's had been requested and are being performed. The sector analysis and some of the specific EIA [previously] prepared by Bechtel will have to be updated if the operation goes back on line. There may be some action on the project after the [local] elections in May.

For the March 1995 report, the World Bank stated that a detailed EA of the entire electric power sector has just recently been completed, and is being reviewed by the Bank. This study, which was financed by USAID, also examined in detail the environmental implications of the two new thermal power plants which the Power II project would help finance. Moreover, the study recommended specific improvements in the environmental management of the power plants, including the transportation land storage of coal and the management of ash residues. The Bank reported that project-specific EAs will be carried out for the two sites mentioned above, before any construction activities start at those sites. The EA category was changed from an B to an A since this report was last issued in December 1993.

In conclusion, USAID's emphasizes the need for project-specific EAs conducted with careful consideration given to *site location alternatives*, local participation, marine resources and contamination. The above sectoral EA, though very valuable, will not guarantee complete coverage of the proposed Power II project sites.

World Bank recently confirmed that a project-specific EA should be carried out by the company selected to develop the proposed 250MW power plant, before starting its construction. This condition has been included in the proposed Request for Proposal for the above power plant.

**20. Ecuador: IDB - National Roads Program II**

Projected IDB Funding: \$ 80 million  
Projected Total Cost: \$100 million  
Tentative IDB Board Date: Unknown  
Stage: In identification.  
IDB EA Category: **Not yet determined**  
Project ID: EC0132  
Project first entered: April 1998  
Entry updated: March 1999

Description: To continue the current pluriannual program to rehabilitate and maintain the national road system.

Issues: The National Roads Program II project (EC0132) is of major concern, because the Ministry of Public Works and the Provincial Councils do not always consider the environment when building infrastructure. Cases in point are the Borbón-Mataje road and the Cuenca-Molleturo road. This project will need to establish an Environmental Assessment for each road to be rehabilitated or improved.

Regarding the Cuenca-Molleturo Road II (EC0181): The Cuenca-Molleturo road, as the IDB well knows, is ALREADY AN ENVIRONMENTAL DISASTER, having caused eutrophication of numerous paramo lakes [in a national park], destruction of large areas of montaine rain forests with probable consequent loss of biological diversity, severe soil erosion, elimination of tourism businesses, flooding and permanent loss of prime coastal agricultural land, and sedimentation and loss of marine life in mangrove forests.

Any additional loans for this road should undoubtedly include severe requirements for environmental analysis to define necessary mitigations of environmental impacts that have already been caused as well as identification and mitigation of impacts from new proposed actions. [USAID/Ecuador Email 4/17/98].

Status: These comments have been conveyed to IDB staff, which responded that National Roads Program II Project on road rehabilitation is being considered in the pipeline for the year 2000, but it has not been initiated. The processing of this program is contingent to solving several issues, political, institutional and technical. One of such issues is the long term mitigation of the environmental and social damages caused by the Cuenca-Molleturo-Naranjal road.

Emergency works and detailed studies for a more definite solution to these damages are being financed through the Emergency Program for El Niño, approved in November 1997 (US\$16 million were tied to this

road). Other issues have to do with the institutional capacity of the MOP to manage all technical matters, particularly environmental issues.

As part of preparation of the National Road Rehabilitation Program, a sector environmental and social assessment will be developed. It will stress cross sector institutional/policy issues related to environmental management, environmental and social impacts and mitigation measures of each project included in the program menu, and specific environmental and social requirements and procedures to be applied during program implementation.

Regarding the Cuenca/Molleturo Two Project (EC-0181), it no longer appears as a possible 1999-2001 loan, which means it will not be considered in the near future. It has not been completely eliminated as a possible project; later on, if and only if the social and environmental problems are now facing with the impact of Cuenca Molleturo One, can be adequately resolved. The Bank is very involved in the continuous follow up and revision of this case and all its very delicate and sensitive social and environmental problems.. [IDB email, March 1999]

21. Ecuador: IDB - Urban Development II

Projected IDB Funding: \$ 75 million  
Projected Total Cost: \$240 million  
Tentative IDB Board Date: Unknown  
Stage: In preparation.  
IDB EA Category: **An Environmental Impact Assessment would be required.**  
Project ID: EC0139  
Project first entered: April 1998  
Entry updated: April 1999

Description: This second phase would continue the current Municipal Development Program, which will be expanded to include decentralization of functions to provincial governments. It would consist of the following components: (a) a line of credit for investments; (b) technical assistance; and (c) institutional development for the sector.

The first component would provide credit financing for local public sector infrastructure projects or packages of projects that make up a local investment program. The technical assistance component would provide assistance in: (a) development of local autonomous service entities; (b) strategic planning; and (c) community participation in service management. The municipal training would be directed at sectional governments and local service agencies involved in managing services, finances, credit and the environment. The institutional development component would strengthen the agencies participating in this program, as well as support a plan to get commercial banks and capital markets involved in local financing. A financial information and tracing system for municipalities would be strengthened to continuously evaluate their capacity to service their debts and the coverage, organization, costs and quality of the services they provide.

Issues: USAID/Ecuador and USAID/Regional Urban Development Office are working with several small municipalities in Ecuador, mainly on solid waste management. Since this project includes a credit component for unidentified investments, USAID/Ecuador agrees it will need more than an Environmental Assessment. It will be useful to know if it is a country-wide implementation project or if the municipalities to be served are already identified, to avoid duplication of efforts with our programs and due to the small funding USAID/Ecuador has. [USAID/Ecuador Email 4/17/98].

Status: These comments have been conveyed to IDB staff, which responded that the resources from PDM II will be made available to all municipalities and public or private entities that, as a result of the project, provide local public services. Funds will be provided on a credit basis with a small subsidy component calculated on a set of

predetermined criteria. The projects will have to meet the environmental, financial, economic, technical and institutional evaluation criteria. The clients will be evaluated for credit worthiness.

The Environmental Impact Assessment Report for PDM II will include:

1. The Environmental Policy statement for the PDM II.
2. An updated set of Environmental Evaluation Manuals, per sector to be financed, covering actions and steps per stage in the project cycle, from the identification stage. The purpose of these guidelines is to ensure environmentally sound and sustainable investments.
3. Environmental Guidelines for contractors.
4. Design of training modules on environmental assessment and management for local officials and for BEDE.

[IDB Email, March 1999]



**22. El Salvador: IDB - Critical Areas of Decontamination**

Projected IDB Funding: \$ 45 million  
Projected Total Cost: \$ 55 million  
Tentative IDB Board Date: July 1999  
Stage: Final  
IDB EA Category: **Full EIA & Social Assessments  
integrated in project preparation**  
Project ID: ES0074  
Project first entered: January 1997  
Entry updated: March 1999

Description: The program would be at a national level with a concentration in the urban areas and would cover: protection of selected contaminated bodies of water; solid waste management in urban centers; monitoring of the main sources of atmospheric pollutants and institutional strengthening of the entities involved. It would consist of two components: (a) support for an environmental regulatory framework; and (b) integrated management of solid waste in small- and medium-sized cities.

Local viable solutions are sought. The idea is to strengthen municipal capacity to manage solid waste and get community and private sector involvement.

There is a small component to establish basic capacity in the country to monitor air quality, and to help on related policy and regulation issues.

Protection of specific sources of potable water (aquifers) includes Opico Quezaltepeque and the Lago Ilopango watersheds [these two aquifers are no longer included in the project]. In the former, the idea is to find a solution to an illegal waste dump sitting on top of the main aquifer for San Salvador. In the latter, the objective is to protect the potable water plant on the Cuaya River, in the Lago Ilopango watershed. Protection measures may include some work with the local industries for pollution control, with the municipalities for solid waste and sanitation work. This may become a small-scale pilot project for integrated pollution control in a very specific area. The program will also include institutional support, capacity building, education and promotion. [e-mail: USAID/El Salvador 10Dec96]

Issues: The Critical Areas of the Decontamination Project could have a moderate to severe effect on the environment during construction depending on where the systems are located. Normal IDB environmental review and mitigation procedures should be carefully monitored for this project. Actual implementation through local institutions should ensure that these institutions have environmental monitoring units

established in the entity AND that appropriate procedures for following mitigation are in place AND actually carried out.

USAID/El Salvador has maintained close liaison with the IDB and the Secretariat of the Environment (SEMA) for the overall El Salvadoran Environmental Program (PAES) of which this project is a part. USAID/El Salvador's environmental program includes complementary actions to project 0074 which will require close coordination. This coordination should ensure that USAID will be aware of adverse impacts and can assist in drawing them to the attention of IDB if necessary. As mentioned in the project brief, the PAES is assisting SEMA in the strengthening of their Environmental Impact Assessment Division, and USAID/El Salvador has also worked with this group. USAID recommends that the IDB continue with its plans for an Environmental Review and that the mitigation suggested be carefully followed. [e-mail: USAID/El Salvador 10Dec96]

Status: In response to the above comments, IDB staff said that the project will focus on the capacity to do air quality monitoring, developing an institutional framework, and technical support implementing agencies. Solid waste management support will go to medium-sized municipalities to develop locally viable solutions. For industrial pollution, the project will focus on two key water sources, to protect key water sources. This will prevent problems with contamination of these aquifers. The project will help define a strategy for management of solid waste, with some financing available for improved management of existing systems. Mitigation measures for solid waste management will be decided upon in consultation with local communities. Appropriate procedures are in place for environmental mitigation measures and their implementation. IDB will closely monitor the implementation of this project. [e-mail: IDB 29Apr97]

IDB also responded that, basically, the program is conceptualized as an environmental one, designed to strengthening the Ministry of the Environment in three critical areas: air, water and solid waste regulation. The focus is on information gathering, monitoring, development of action plans and strategies, and implementation of norms and regulations. Integrated solid waste management activities and investments are included for small and medium size municipalities. There aren't any investments in water pollution control at this stage. The Opico-Quezaltepeque activities and the protection of the Cuaya River are not included anymore. IDB procedures were followed regarding social and environmental assessments. [IDB email, March 1999]

**23. Guyana: GEF - National Protected Area Systems<sup>n</sup>**

Projected GEF Funding: \$ 6 million  
Projected Total Cost: \$ 9 million  
Tentative WB Board Date: To be determined  
Stage: Project preparation is underway  
EA Category: **B**  
Project ID: GYGE37003  
Project first entered: April 1999  
Entry updated: March 1999

Description: The project will enable the government to establish a national system of protected areas which would conserve globally important biodiversity as an essential step toward the sustainable management of the country's natural resources, and the maintenance of access to international markets for these resources.

Issues: The lack of consultation between the GOG and the Amerindian community in the area of Kaieteur Falls National Park is a major problem. The Kaieteur Falls park area came as an immediate response to what had been determined to be contamination in the water - likely due to mining operations. It is hard to believe that the Amerindian communities didn't know anything about it. Certainly their organizations in Georgetown knew.

It appears that neither side knows how to tackle this problem. It is, more than anything else a land title/use issue and is both complex and controversial.

The ball should be in the World Bank's court - and it should be pressuring the GOG to hold meetings (perhaps with an independent facilitator) with the Amerindian groups to begin the dialogue. Their needs to be a long-term vision and strategy on both sides and an understanding that there will be some accommodation by both.  
[USAID/Guyana email]

Status: These comments have been conveyed to the World Bank.

**24. Haiti: IDB - Agricultural Sector Modernization**

Projected IDB Funding: \$ 43 million  
Projected Total Cost: \$ 48 million  
Tentative IDB Board Date: June 1999  
Stage: Final  
IDB EA Category: **EIA and Social Impact Assessment  
required**  
Project ID: HA0016  
Project first entered: January 1997  
Entry updated: March 1999

Description: The objective of the program is to enable farmers to increase their incomes and total output through intensification of staple and export crop production in selected areas of Haiti with high sustainable potential. The program would finance institutional and physical infrastructure required to improve producer access to and utilization of water and land resources, as well as strengthen selected support services. It would include three components:

- a) a water resource management component to complete feasibility studies and implement selected irrigation schemes, including rehabilitation of existing infrastructure, construction of additional water impoundment, diversion and distribution facilities, and assistance in the establishment of a system of private water-user groups and upstream watershed management through institutional strengthening and institution-building activities at the local level;
- b) a land tenure administration component to implement key elements of the investment program being developed the Instituto de Reforme Agraire (INARA), including investments in equipment, systems installations, technical assistance and training for that agency; and
- c) an agricultural support services component to focus on reinforcing the regulatory and supervisory capacities of the executing agency to assure that selected support services be provided to producers in the intensified production areas (although actual service delivery may be provided by private firms or NGOs), particularly in the areas of technology transfers, soil conservation measures, and animal and plant health protection

Issues: One of the project components will be dealing with construction of water impoundments and diversion of water from streams. There is also a potential for population resettlement; changes in the agricultural production systems. Use of chemicals (fertilizers & pesticides), should also be carefully addressed in the environmental assessment process.

There is some overlap with USAID projects : ASSET 2000 (not yet

funded), Productive Land Use Systems, and Coffee Revitalization. [e-mail: USAID/Haiti, 12Dec96]

Status: These comments have been conveyed to IDB staff, which responded that the program anticipates water diversion but no longer any impoundment. The Bank's Dutch Environmental Trust Fund recently completed an analysis of the impact of the proposed water diversion on downstream water availability and quality, concluding that they would not be adversely affected. Furthermore the hydrological impact assessment methodology is being transferred to the national hydrological monitoring service (SNRE) to be used to evaluate future prospective sites, supported by outside technical assistance. The program envisions no resettlement, in fact Sub-Program B will enable the population to return to areas from which they were displaced by Hurricane Georges and which are still at risk from future flooding. The measures for monitoring and protecting the population from contamination from agricultural chemicals, amongst various other potential environmental and social impact measures, have been presented and approved by the Bank's review entity, the Committee on Environment and Social Impact (CESI).[Email: March 1999]

**25. Panama: IDB - Mining Sector Loan**

Projected IDB Funding: \$ 17.5 million  
Projected Total Cost: \$ 25 million  
Tentative Board Date: June 1999  
Stage: In preparation.  
IDB EA Category: Environmental Management Framework  
Required  
Project ID: PN0114  
Project first entered: April 1998  
Entry updated: **March 1999**

Description: The program would establish the legal, fiscal, institutional and technical framework to promote private investment in the mining sector, while protecting the rights and interests of rural communities and indigenous peoples, as well as protecting the environment. It would include the following components:

- a) fiscal and legal reforms (\$250,000) to attract private investment, modify the tax regime as it applies to mining in order to bring Panama up to international standards, and improve security for mine properties;
- b) institutional modernization (\$2,200,000), including restructuring of the Dirección General de Recursos Minerales (DGRM) to improve its financial and administrative autonomy, as well as training for personnel, basic equipment, and promotional activities for the mining sector;
- c) community participation (\$1,500,000), including community development activities, to make sure that rural communities', indigenous peoples' and investors' needs are all taken into account and met;
- d) environment (\$1,400,000), to consolidate the legal and institutional framework for environmental management within the mining sector by creating an environmental management unit within the executing agency (MICI) that has the capacity to evaluate environmental impacts and supervise the application of the law;
- e) geological information (\$13,500,000), to generate and disseminate geological information in order to facilitate prospecting, as well as to develop environmental policies (including a topographical map, geomagnetic maps, radar maps, and a geochemical map of the entire country, as well as a 15-page digital geological map of priority areas on a 1:50,000 scale and a mining and geological information system); and
- f) training for mining specialists.

The program's components are:

Issues: The mining projects currently authorized are only for nonmetallic minerals. Since the last protests from indigenous groups affected by mining projects in the Chiriqui Province, the GOP assured the public that the Ministry of Commerce would submit an EIA prior to approval of any mining project. An unresolved problem still exists with an indigenous group in Chiriqui where a mining project is in the process of being approved by the GOP. There is another mining project within the Chagres National Park in the Panama Canal watershed that has yet to be approved by INRENARE (the National Institute for Renewable Natural Resources) because of concerns about park degradation. INRENARE is considering requiring mitigation through the purchase of additional lands for the National Park. [USIAD/Panama Email, March 1998].

Status: These comments have been conveyed to IDB staff, which responded that the referred project is not intended to have any physical investments for mining development. Rather, its purpose is mostly to help the GOPN establish the legal (including environmental and community participation) framework for the mining sector (concessions; zoning and the like) and baseline cartography and environmental management strengthening necessary, both at the national environmental authority (ANAM) and at the sectoral Ministry in charge (Environmental Sectoral Unit of the Ministry of Industry, Commerce and Mining).

Therefore, the project team is designing a specific environmental component which will cover those issues. [Email: March 1999]

26. Panama: IDB - Local Development Program  
(Formerly, Social Emergency Fund II)

Projected IDB Funding: \$ 50 million  
Projected Total Cost: Pending definition  
Tentative Board Date: August 1999  
Stage: In preparation  
IDB EA Category: **Evaluation and improved EIA control  
included in project**  
Project ID: PN0111  
Project first entered: April 1998  
Entry updated: March 1999

Description: Definition of a strategy to extend the mandate of the Social Emergency Fund to include an increased emphasis on local development.

Issues: The change towards increased emphasis on local development has no salient environmental impacts. Regarding FES projects in general, INRENARE and the Social Emergency Fund (FES) are negotiating an agreement that would allow FES to use a computerized mechanism for environmental impact assessments of its projects (these EIAs will then be submitted to INRENARE for approval). FES has met with ANCON, an NGO, to learn about their computerized EIA program with the possibility of adopting the same methodology. When the system is up and running, it should be required that all proposed FES projects pass through the EIA process before approval. [USAID/Panama email, March 1998].

Status: These comments have been conveyed to IDB staff, which responded that as the USAID report indicates the change towards increased emphasis on local development has no salient environmental impacts. If anything, and thanks to independent evaluations of the First Phase of the FES approved by the Bank and almost fully completed, the Panamanian authorities are committed to strengthen four areas: (i) financial administration; (ii) information systems; (iii) planning capacity; and (iv) environmental quality control. As a result of the last recommendation, the FES has recently established an Office for Environmental Quality Control (Dirección de Control de Calidad Ambiental) that will report periodically to the ANAM, the new national environmental authority. [March 1999].



**27. Paraguay: IDB - Development of Asunción Bay Coastal Area**

Projected IDB Funding: \$ 27 million  
Projected Total Cost: \$ 30 million  
Tentative Board Date: January 2000  
Stage: In preparation.  
IDB EA Category: **Environmental Assessment Required (3)**  
Project ID: PR0043  
Project first entered: January 1997  
Entry updated: March 1999

Description: An integrated program to protect Asunción from flooding by the Paraguay River. The program would include:

- a) construction of a protective road;
- b) residential development;
- c) relocation of inhabitants by the river;
- d) housing consolidation;
- e) protection of natural areas;
- f) employment improvement; and
- g) reconversion of building facilities (convention center, tourism projects, and other facilities).

Issues: The design of this project incorporated environmental considerations from the very beginning, however environmental impact assessment should be done as required by Paraguayan law. Proposed dredging and filling activities should be designed so as to have minimal impact on wetland ecosystems along the Paraguay river bank. This project has also been framed by NGOs and the Government within the context of the controversial Hidrovía project that is proposed for the Paraguay River. Therefore, it should be studied with care and integrated within the broader context of development for the region. Resettlement indicates that the project environmental assessment category should be a 4. [e-mail: USAID/Paraguay 03Dec96]

Status: Comments have been conveyed to the IDB staff, which reported that both projects [the Asunción Bay project and the National Environmental Program - PR017] contains specific components or activities for developing and implementing sustainable natural resource policies. These include the establishment of an independent environmental authority, strengthening the Environment and Forestry Directorates of the Subsecretary of Natural Resources, and a planning and policy group in the re-structured MAG. Finally, at the level of extension and education activities, the Terms of Reference include sustainable resource use, integrated pest management, etc. (E-mail: IDB 25Apr97]

Status: IDB responded that:

1. The principal objective of the Development of Asunción Bay Coastal Area was not to comprehensively protect Asunción from all flooding because just a small part of the flooding area was covered by the project, the "bañado norte". The principal objective was to develop the urban zone where low-income families live in the flooded area of bañado norte. A road project, that has important environmental flood protection components, was also included in this project.
2. A consulting firm did the EIA according to the country's environmental regulations. The EIA was reviewed and approved by the country's environmental authority and was made available to the public on May 20, of 1997.
3. The bay area ecosystems were considered in the landfill project. The consulting firm analyzed different alternatives and chose the one that minimized the impact and maximized the conservation of ecosystems. This is described in the EIA that was sent to the IDB Public Information Center on February 17, 1998.
4. The EIA also describes the fluvial hydraulic analyses of the impacts of dredging upstream and downstream.
5. This project is not part of the Hidrovía project. This is why the Hidrovía effects were not evaluated in a wider regional context. Nevertheless, an analysis of the river was done to evaluate the Hidrovía effects on the project, especially a proposed removal of rivershed rocks upstream.
6. The project is not a category 4, since the resettlement is temporary, while urban and safety conditions in the area are improved by the project. In the design of the project, extreme care was taken to minimize the inconveniences to the beneficiaries, by minimizing the required resettlement time and the distance from their original living and working places. The population indicated in surveys its desire to remain in their original places once these were improved. Their preferences were reflected in the selected plan.
7. Finally, the municipal authorities of Asuncion and the government of Paraguay are making changes to the project. The project is now waiting for its official resubmittal. Once the changes are received, they will be evaluated from the social and environmental points of view, as was the original design.

**PROJECTS LOCATED IN THE MIDDLE EAST AND NORTH AFRICA**

**28. Jordan: IBRD - Disi Amman Conveyor Project**

Projected IBRD Funding: \$ 100 million  
Projected Total Cost: \$ 730 million  
Tentative Board Date: March 1999  
Stage: Project preparation underway  
World Bank EA Category: **A (EA due June 1999)**  
Project ID: JOGU51749  
Project first entered: December 1996  
Entry updated: April 1999

Description: The development objective of the operation is to provide an adequate and reliable supply of bulk water to meet the needs of municipal and industrial consumers in greater Amman. The project will be implemented and managed by a private sector concessionaire, with costs recovered from consumers, and within the context of a strengthened national water resources management capability.

The proposed project would consist of development of two well fields; transmission facilities including pump stations and approximately 320 km of pipeline; reservoirs; monitoring and control equipment; all constructed and operated under a Build, Operate and Transfer (BOT) contract with a 20-year concession to supply bulk water to Amman.

Issues: The project is intended to pump groundwater from the Disi aquifer that is non-rechargeable. The Feasibility Study conducted on the Disi aquifer shows that it will sustain a water supply of 50 million cubic meters per year for 100 years. The major environmental issues facing this project are the sustainability of the project, soil erosion and cultural heritage. [e-mail: USAID/Jordan 12/12/96]

Status: An EA has been prepared by consultants to the government of Jordan as part of the Feasibility Study and is the subject of Bank review. Because of the high cost of the project, the Bank is giving priority support to a project to improve the efficiency of water management in Amman. (USAID's comments supporting this project have been received). The non-renewable nature of the Disi aquifer (depletion of natural capital) will be taken into account during the economic appraisal of the project according to established Bank practices. World Bank staff agrees with USAID's other comments and appropriate provision will be made in project design. [World Bank fax: 1/30/97]

**29. Jordan: IBRD - Samra First Private Power<sup>n</sup>**

Projected IBRD Funding: \$ 50 million  
Projected Total Cost: \$200-250 million  
Tentative Board Date: December 1999  
Stage: The request for proposals for selection of private project sponsors has been released.

World Bank EA Category: **A**  
Project ID: JOPA55678  
Project first entered: February 1999  
Entry updated: April 1999  
Task Manager: Ms. Zoubeida Ladhibi-Belk(458-0020)

Description: The project will consist of a 300-450 MW, dual-fired (diesel oil and natural gas) combined-cycle power plant to be located near Amman and developed by a private special purpose company on a build, own and operate basis. It will (a) support the government's new initiative for private power generation and its efforts to tap new sources of private capital for the power sector; (b) add new power generating capacity at competitive prices while improving the efficiency and reliability of the power supply; and (c) strengthen the capacity of the Ministry of Energy and Natural Resources to prepare future private projects and put into effect key policies for the sustainable development of the energy sector.

Issues: USAID is trying to mitigate the environmental effect of As-samra treatment plant on the people residing around As-Samra. At present the residents of As-Samra as well as residents of other nearby communities suffers environmentally from the effect of Refinery, the existing thermal power station located near the Refinery, plus the As-Samra stabilization ponds. The GOJ is planning to build a mechanical wastewater system to replace the As-Samra Ponds, and thereby reduce the environmental effect on the people of those areas.

This power project is planned to be built near As-Samra, for several reasons among which, to use the effluent coming out from the As-Samra to cool the power plant towers. In addition to its environmental effect on the communities, the effect of warming the effluent should be examined and discussed in details. Warming the treatment plant effluent will have its effect on the use of this effluent on using it in irrigation plus it may effect the water reservoir of King Talal Dam.

In Aqaba, the National Electric Power Company is expanding the capacity of its existing thermal power station, which uses heavy fuel oil, from 260 MW to double this capacity. The present expansion will meet Jordan demand through 2005-2010. The plant in Aqaba uses seawater as a cooling source. [USAID/Jordan email: 02/04/99]

Status: World Bank staff responded that:

- a) The expansion being mentioned for Aqaba power station is being completed and has been taken into consideration when doing the demand forecast to investigate the timing of the proposed Samra power project. Based on the current estimate Samra will be needed as early as 2002/2003;
- b) The site for Samra was selected for two main reasons: one, as indicated in USAID's message, i.e the use of the waste water from the treatment plant; the second is the close proximity to the load center is Amman;
- c) The project is classified as Category A for environmental assessment. The environmental aspects of the project will be carried out in accordance with the Bank's directives and guidelines. The issues USAID raised will be investigated when the selected sponsors will be preparing the environmental assessment. [World Bank email, 05/05/99]

## **1995-1999 ANALYSIS OF UPCOMING MDB PROJECTS WITH ENVIRONMENTAL CONCERNS**

This section is a brief analysis of the annual lists of MDB projects that were submitted to Congress between 1995-1999. The purpose is to discern possible trends in MDB progress towards implementing sound environmental impact assessment procedures.

The five most recent annual reports list a cumulative total of 161 projects with environmental concerns (Figures 1a and 1b). This comprises 103 individual projects when considering the approximate 35% overlap of projects between years (projects are kept on the list until they are approved, dropped or put into a reserve program). The year with the fewest projects listed was 1996 with 21 projects and the most was in 1998 with 47. The total funding represented is \$8.9 billion in proposed (individual) MDB financed loans and \$35.3 billion in total project costs when contributions from all investors are added.

When considering the graphs in this section it is important to keep in mind that because of limited resources, these reports to Congress are a representative rather than an absolute number of MDB projects with environmental concerns. These numbers are influenced to a degree by the level of resources available in a given year both within USAID and with our partners. They are also affected by the number of countries in which USAID has a presence in a given year. For example, USAID has no programs in China and many other countries where MDBs are active, so it is difficult for USAID to monitor MDB activities there. Still, USAID feels that these numbers are useful indicators.

As seen in Figure 1a, the number of projects reported to Congress in USAID's annual report varies from year to year, ranging from 21 to 47 with an average of 32. There is no clear trend in the number of projects during 1995 to 1999. While the significant decrease from 1998 to 1999 is hopeful, given the fluctuation over the previous years it would be premature to state that this is a trend, especially since our ongoing work of identifying new projects with potential issues does not seem to be falling off. At least for the near term, it appears that a significant number of MDB projects with potential environmental problems will continue cropping up.

As seen in Figure 1b, the proposed MDB loan dollar values in these projects is also variable, ranging from about \$2.3 billion in 1999 to \$3.8 billion in 1997. The total costs of these particular projects, including all other investors, is significantly higher than the MDB investment alone, ranging from \$9.2 billion in 1995 to \$17.2 billion in 1997. These figures are likely to be conservative, as information on other investors was sometimes not available. These numbers indicate that MDB investments on these projects constitute an average

Figure 1a: Summary of MDB Projects with Environmental Concerns Number Reported by Year, 1995-1999.

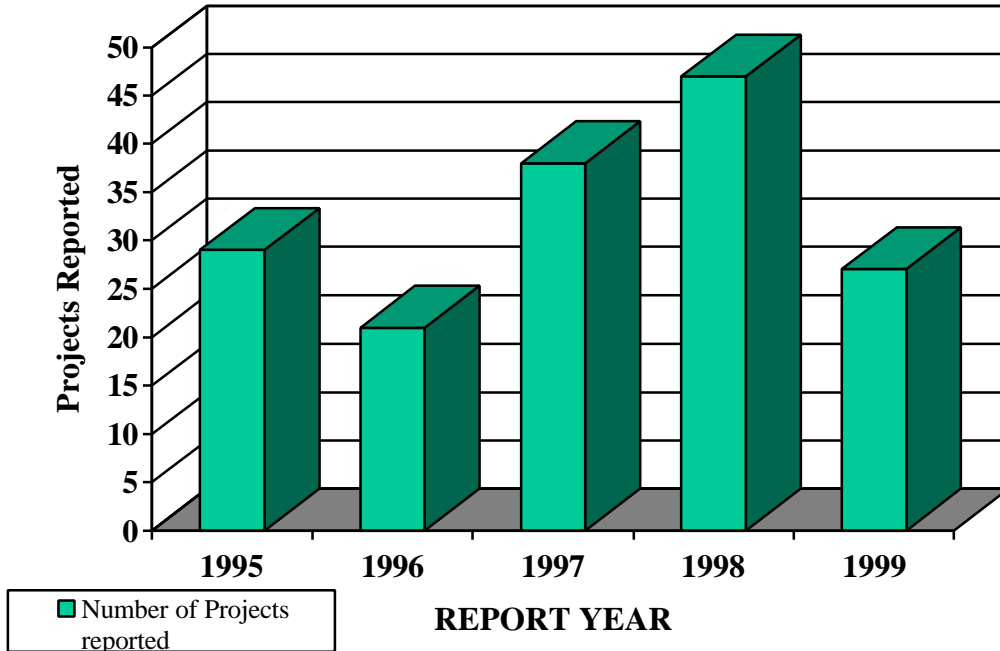
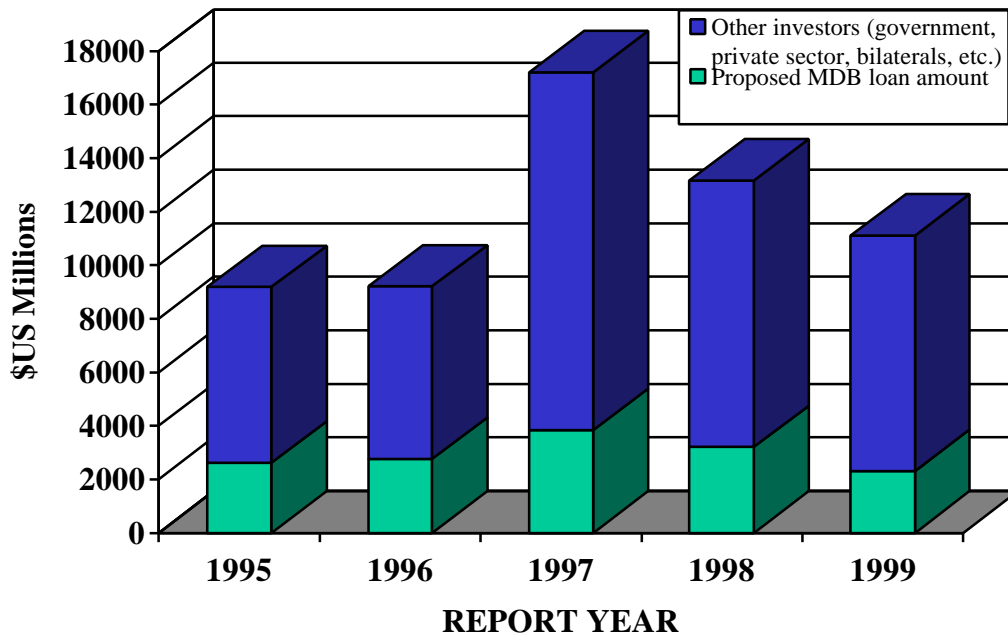


Figure 1b: Summary of MDB Projects with Environmental Concerns in \$US Million by year, 1995-1999.



of 20% to 25% of the total, leveraging projects that are considerably larger than the MDB investment alone. The impact of this leveraging is that environmental impacts can be greatly magnified beyond just what would result from the MDB loan amounts. As with the number of projects seen in Figure 1a, there is a promising downward trend in the dollar value, but again, it is not clear yet whether this represents a real trend or is just year to year variability.

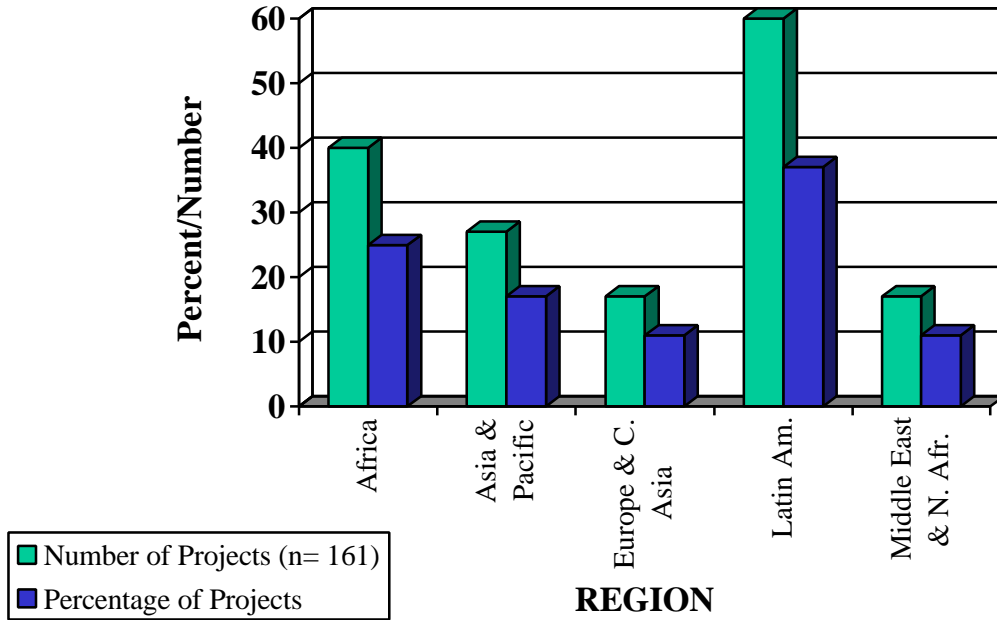
A regional analysis of the proposed MDB projects with environmental concerns is presented in Figures 2 and 3. During the five-year period, the reports highlighted 60 projects (37%) with environmental concerns in the Latin America/Caribbean region, 40 projects (25%) in Africa, and 27 projects (17%) in the Asia/Pacific region. Europe/Central Asia and the Middle East/North Africa regions trail the others with just 17 projects (11%) each. The high level of projects with environmental concerns from the Latin America/Caribbean region may be due to the greater USAID and partner NGO presence in the region. It may also be due to the LAC region's proximity to the US which facilitates communications with the World Bank and the Inter-American Bank headquarters, both located in Washington DC. One might expect the Asia/Pacific region to be more represented since the World Bank approves approximately one third of its annual commitment to projects in the East Asia/Pacific region. For example, \$9.6 billion of IBRD/IDA commitments went to this region in 1998, including \$2.6 billion to China alone, out of a total of \$28.6 billion for the year. However, with USAID presence limited to Cambodia, Indonesia and the Philippines, it is difficult to review the MDB portfolio for the entire region.

The Latin America/Caribbean region led the other regions with \$4.6 billion in proposed MDB loans to projects with environmental concerns within the 1995-1999 period (Figure 3). The Europe/Central Asia region was second with just under \$4 billion in proposed loans. Africa, Asia/Pacific, and Middle East/North Africa regions had \$3.1 million, \$2.0 million, and \$1.0 million respectively in proposed loans to projects with environmental concerns. Considering that the report listed the least number of projects in the Europe/Central Asia region, it is surprising that it had such a high level of proposed loans. Upon closer examination, the region included many large power sector projects, such as the Russia Petroleum Joint Venture (IBRD, \$500 million), Azerbaijan Early Oil (IFC/EBRD \$400 million), and the Slovak Republic Mochovce Nuclear Safety Improvement (EBRD, \$300 million) projects. The scale of these projects makes for considerable potential environmental and social impacts.

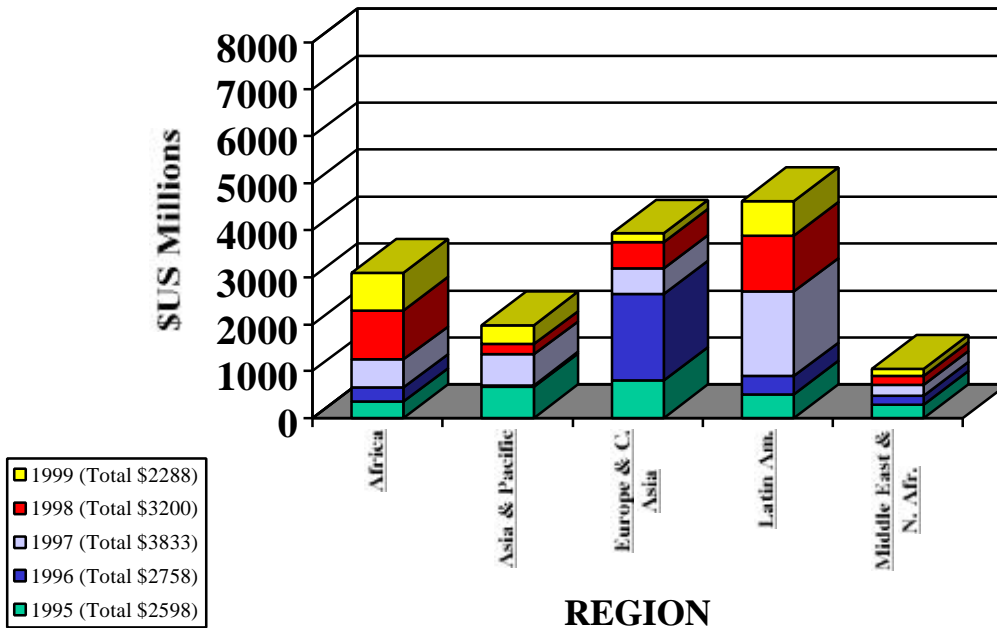
Table 1 lists the main sectors having environmental concerns in each region during the 1995-1999 period. In the LAC region, the main sectors were transport and urban/public infrastructure, with about one fourth of the projects listed in each.



**Figure 2: MDB Projects with Environmental Concerns by Region, 1995-1999.**



**Figure 3: MDB Projects with Environmental Concerns by Region in \$US Millions, 1995-1999.**



The sectors with the most projects in the Africa region were power and transport. In the Asia/Pacific region, urban/public infrastructure, transport, and agriculture were the main sectors. In the Europe/Central Asia region, the main sectors were power and urban/public Infrastructure. The Middle East/North Africa's most represented sector by far was urban/public infrastructure, which accounted for over 60% percent of the MDB projects.

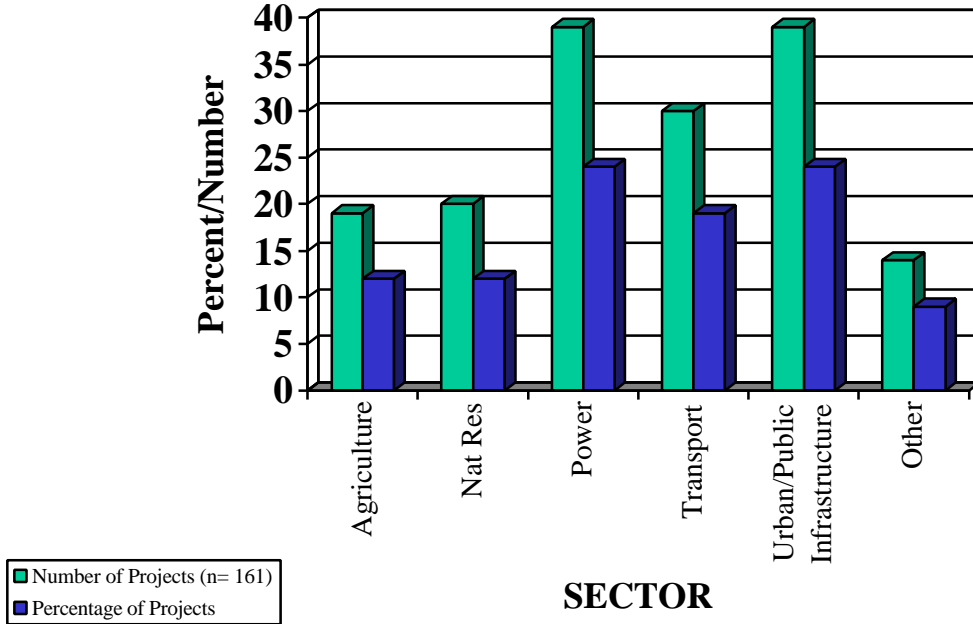
**Table 1: Principle sectors reported on by region, USAID 1995-1999 reports to Congress, Upcoming MDB Projects with Possible Environmental Concerns.**

SECTORS						
REGIONS	Agri-culture	Power	Trans- port	Urban/ Public Infra.	Other Sectors	Total
<b>Africa</b>	10%	35%	23%	8%	24%	100%
<b>Asia/Pac</b>	21%	25%	4%	32%	18%	100%
<b>Eur./Cen. Asia</b>	6%	47%	18%	24%	4%	100%
<b>Latin Am./Car.</b>	10%	15%	27%	23%	25%	100%
<b>M.East/N. Africa</b>	13%	0%	6%	63%	25%	100%

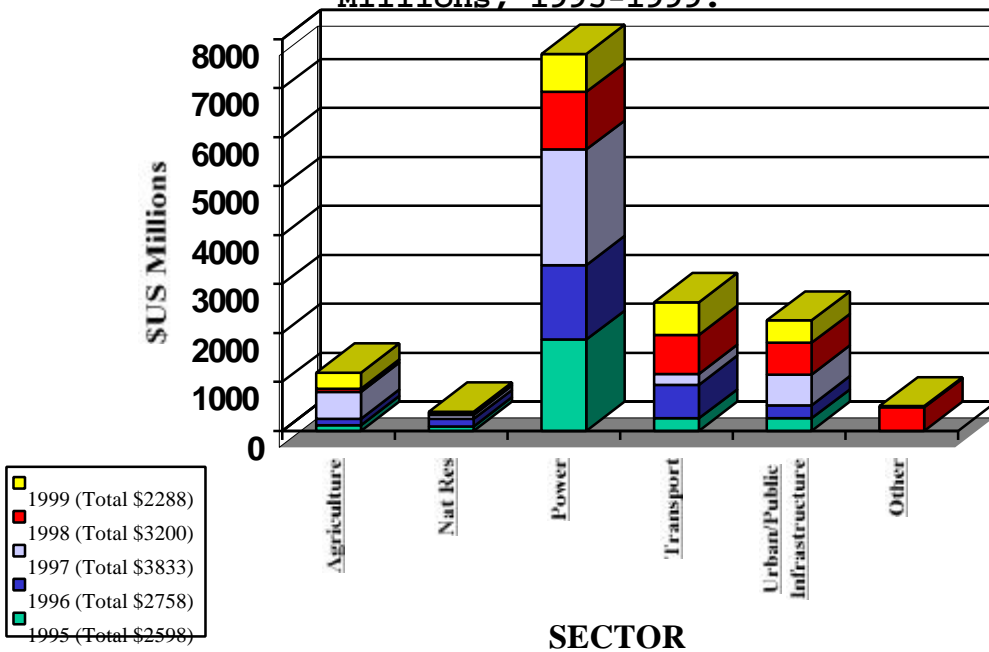
A sectoral analysis of proposed MDB projects with environmental concerns is portrayed in Figures 4 and 5. The power sector and urban/public infrastructure sectors have the greatest number of projects with 39 each (24% each). The transport sector followed with 30 projects (19%), natural resource with 20 projects (12%), agriculture with 19 projects (12%), and other sectors with 14 project (6%). The power sector had \$7.7 billion in proposed MDB loans to projects with environmental concerns during the five-year period (Figure 5), as much as all the other sectors combined. These same projects in the power sector total \$40.2 billion when considering total project costs (including all investors). The MDB investment in the power sector is considerable, as are the potential environmental and social impacts.

The transport sector had \$2.6 billion in proposed MDB loans to projects with environmental concerns, followed by \$2.3 billion in the urban/public infrastructure sector, \$1.2 billion in the agriculture sector, \$0.5 billion in other sectors combined, and \$0.4 billion in the natural resources sector. The power, transport and urban/public infrastructure sectors are consistently highlighted in this report with environmental concerns. These are also the sectors with the highest MDB financial investment, especially the power sector. Other sectors are inconsistently reported on over the 1995-1999 period.

**Figure 4: MDB Projects with Environmental Concerns by Sector, 1995-1999.**



**Figure 5: MDB Projects with Environmental Concerns by Sector in \$US Millions, 1995-1999.**



The projects highlighted cover about five to ten percent of the major (AfDB, ADB, EBRD, IBRD/IDA, and IDB) multilateral development banks' annual commitment to project loans, about \$30-\$50 billion per year over the past five years. These figures are a concern considering that:

- 1) the report concentrates on countries where USAID has a presence, missing many of the countries (such as China) where there is significant MDB spending. For example IBRD/IDA and ADB committed 10% and 20% respectively of their total lending in 1998 to China; and
- 2) the World Bank IBRD/IDA commitment to projects specifically designed to be environmentally beneficial has declined from a high of \$747 million in 1994 (or 3.6% of its portfolio) to \$247 million in 1997 (or 1.3% ). This level rose to 902 million in 1998, but this is still only 3.1% of its annual commitment -- a small number compared to the amount committed to projects with significant negative environmental impacts. For example in 1997, 32% or about \$6 billion of just the World Bank IBRD/IDA lending went to environmentally destructive sectors (including transport; electric power and energy; mining; oil, gas, and coal; and industry sectors). This reported highlighted \$3.8 billion of proposed MDB projects with environmental concerns during the same year.

A significant number of MDB projects with environmental, public health and indigenous peoples concerns coupled with a declining level of MDB spending on environmentally beneficial projects is not encouraging. It raises the question of the degree of sustainability of MDB lending and underscores the critical importance for independent environmental monitoring of the MDBs.

Conclusion: This summary analysis of the past 5 years of reports indicates that while there are signs of both hope and possible slippage, the data is insufficient to declare a trend. While all of the MDBs have modern environmental review procedures and high quality environmental experts in place, implementation continues to be less than optimal. The one solid conclusion that can be reached is that at least for the near term we expect that there will continue to be a substantial number of large MDB projects with environmental concerns.

**REFERENCES**

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