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PROJECT PERFORMANCE ASSESSMENT REPORT

MEXICO

**NORTHERN BORDER ENVIRONMENT PROJECT
(Loan No. 3750)**

**ENVIRONMENTAL STRUCTURAL ADJUSTMENT LOAN
(Loan No. 7136)**

July 11, 2005

*Sector, Thematic, and Global Evaluation Group
Operations Evaluation Department*

Currency Equivalents (annual averages)

Currency Unit = Mexican Peso (MXN)

1994	US\$1.00	MXN3.376	2000	US\$1.00	MXN9.465
1995	US\$1.00	MXN6.276	2001	US\$1.00	MXN9.346
1996	US\$1.00	MXN7.604	2002	US\$1.00	MXN9.682
1997	US\$1.00	MXN7.925	2003	US\$1.00	MXN10.805
1998	US\$1.00	MXN9.514	2004	US\$1.00	MXN11.309
1999	US\$1.00	MXN9.556			

Abbreviations and Acronyms

BANOBRAS	National Bank of Public Works and Services, or <i>Banco Nacional de Obras y Servicios Públicos</i>
CAS	Country Assistance Strategy
CNA	National Water Commission, or <i>Comisión Nacional de Agua</i>
CFE	Federal Electricity Commission, or <i>Comisión Federal de Electricidad</i>
EMS	Environmental Management Systems
EnvSAL	Programmatic Environment Structural Adjustment Loan
GOM	Government of Mexico
ICR	Implementation Completion Report
INE	National Ecology Institute, or <i>Instituto Nacional de Ecología</i>
ITWG	Intersectoral Working Group
M & E	Monitoring and Evaluation
MEP	Mexico Environmental Project
MW	Megawatt
NAFTA	North American Free Trade Agreement
NBEP	Northern Border Environment Project
NDP	National Development Plan
NHP	National Hydraulic Program
OECD	Organization of Economic Cooperation and Development
OED	Operations Evaluation Department
PEMEX	Petróleos Mexicanos
PPAR	Project Performance Assessment Report
PROFEPA	Office of the Attorney General for Environmental Protection, or <i>Procuraduría Federal de Protección al Ambiente</i>
SECAL	Sectoral Adjustment Loan
SEDESOL	Secretariat for Social Development, or <i>Secretaría de Desarrollo Social</i>
SEDUE	Secretariat for Urban Development and Ecology (<i>Secretaría de Desarrollo Urbano y Ecología</i>)
SEMARNAT	Secretariat of Environment and Natural Resources, or <i>Secretaría de Medio Ambiente y Recursos Naturales</i>
SHCP	Secretariat of Finance and Public Credit, or <i>Secretaría de Hacienda y Crédito Público</i>
TA	Technical Assistance

Fiscal Year

Government: January 1 to December 31

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OED Mission: Enhancing development effectiveness through excellence and independence in evaluation.

About this Report

The Operations Evaluation Department assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, OED annually assesses about 25 percent of the Bank's lending operations. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons. The projects, topics, and analytical approaches selected for assessment support larger evaluation studies.

A Project Performance Assessment Report (PPAR) is based on a review of the Implementation Completion Report (a self-evaluation by the responsible Bank department) and fieldwork conducted by OED. To prepare PPARs, OED staff examine project files and other documents, interview operational staff, and in most cases visit the borrowing country for onsite discussions with project staff and beneficiaries. The PPAR thereby seeks to validate and augment the information provided in the ICR, as well as examine issues of special interest to broader OED studies.

Each PPAR is subject to a peer review process and OED management approval. Once cleared internally, the PPAR is reviewed by the responsible Bank department and amended as necessary. The completed PPAR is then sent to the borrower for review; the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

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Relevance of Objectives: The extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). *Possible ratings:* High, Substantial, Modest, Negligible.

Efficacy: The extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance. *Possible ratings:* High, Substantial, Modest, Negligible.

Efficiency: The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. *Possible ratings:* High, Substantial, Modest, Negligible. This rating is not generally applied to adjustment operations.

Sustainability: The resilience to risk of net benefits flows over time. *Possible ratings:* Highly Likely, Likely, Unlikely, Highly Unlikely, Not Evaluable.

Institutional Development Impact: The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial, and natural resources through: (a) better definition, stability, transparency, enforceability, and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Institutional Development Impact includes both intended and unintended effects of a project. *Possible ratings:* High, Substantial, Modest, Negligible.

Outcome: The extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently. *Possible ratings:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project). *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development objectives and sustainability. *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

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This report was prepared by Fernando Manibog, who assessed the project in January 2005, and Ashwin Bhouraskar. The report was edited by William Hurlbut, and Helen Phillip provided administrative support.

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Principal Ratings

	<i>ICR*</i>	<i>ICR Review*</i>	<i>PPAR</i>
Northern Border Environment Project (Loan No. 3750)			
Outcome	Unsatisfactory	Unsatisfactory	Moderately Unsatisfactory
Sustainability	Likely	Non-evaluable	Likely
Institutional Development Impact	High	High	High
Bank Performance	Unsatisfactory	Unsatisfactory	Unsatisfactory
Borrower Performance	Satisfactory	Unsatisfactory	Unsatisfactory
Environmental Structural Adjustment Loan (Loan No. 7136)			
Outcome	Satisfactory	Satisfactory	Satisfactory
Sustainability	Likely	Likely	Likely
Institutional Development Impact	Substantial	Modest	High
Bank Performance	Satisfactory	Satisfactory	Satisfactory
Borrower Performance	Satisfactory	Satisfactory	Satisfactory

* The Implementation Completion Report (ICR) is a self-evaluation by the responsible operational division of the Bank. The ICR Review is an intermediate OED product that seeks to independently verify the findings of the ICR.

Key Staff Responsible

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Preface

This is a Project Performance Assessment Report (PPAR) prepared by the Operations Evaluation Department (OED) on two environment projects in Mexico: the Northern Border Environment Project (NBEP, Loan No. 3750) and the programmatic Environmental Structural Adjustment Loan (EnvSAL I).

The NBEP was approved in June 1994 for a Bank loan of US\$368 million equivalent. After a major restructuring in 1998 due to the Mexican financial crisis, the project closed on September 29, 2003, with a two-year extension and the cancellation of US\$332.9 million equivalent. The EnvSAL I was approved in August 2002, for a Bank loan of US\$202 million equivalent. The project closed after a two-month extension on December 31, 2003, and was fully disbursed.

The NBEP was selected for an OED assessment because it was a unique operation with the high profile objective of assisting Mexico in improving the environmental performance of border states within the context of the North American Free Trade Association (NAFTA). The EnvSAL I was selected for evaluation because it is the first World Bank programmatic loan dedicated to the environment, and lessons from it may be learned for the design of similar operations in other countries and regions. The Bank's first environment project in Mexico was the Environmental Project (Loan No. 3461-ME and GET Grant 28604). It was assessed by OED in 1999 and the findings of the PPAR (Report No. 20424, dated April 28, 2000) are referred to frequently in this PPAR in order to provide a more strategic perspective to the evaluation of the Bank's assistance to the strengthening of environmental institutions and management in Mexico.

The NBEP evaluation is based on the Implementation Completion Report (ICR, Report No. 29569) issued on June 29, 2004, the Bank's project documents and interviews. The EnvSAL I assessment is based on the Simplified ICR (Report No. 29259) issued on June 23, 2004, as well as the Bank's credit documents, interviews and external publications, notably the 1998 and 2003 reports on Mexico's State of the Environment prepared by the Organization for Economic Cooperation and Development (OECD). An OED mission visited Mexico in January 2005 to discuss the effectiveness of the Bank's assistance in these two projects with the Government, project implementing agencies at the national and state levels (which included field visits to Chihuahua, Coahuila and Nuevo Leon), non-governmental environmental institutions, private entities, and other stakeholders. Their cooperation in granting interviews and providing data is gratefully acknowledged. The substantial assistance provided by the Strategic Financing Unit of the Ministry for Environment and Natural Resources (SEMARNAT) during the mission is especially appreciated.

Following standard OED procedures, the draft PPAR was sent to the borrower for comments. Comments have been taken into account.

Summary

The Northern Border Environment Project (NBEP) and the Environmental Structural Adjustment Loan (EnvSAL I) are the second and third projects, respectively, that the Bank has supported in Mexico for environmental improvement and the strengthening of environmental management and institutions. The first project was the Mexico Environmental Project (MEP), on which OED prepared a Project Performance Assessment Report (PPAR) in April 2000.

The original objectives of the NBEP, which was approved in 1994, were to improve environmental conditions in Mexico's northern border area by assisting the Government of Mexico (GOM) and the border region states and municipalities in: (a) strengthening their environmental planning, management and enforcement capabilities; and (b) carrying out priority investments and action plans to preserve the environment, reverse past environmental degradation and reduce health risks from environmental contamination. Owing to the 1995 financial crisis, the GOM cancelled the investment components and thus the bulk of the loan. In 1998 the objectives were revised and the legal documents were amended to focus essentially on strengthening the environmental institutions at the federal, state and municipal levels of government.

The project's *outcome* is rated *moderately unsatisfactory* overall. The NBEP was progressing unsatisfactorily in achieving its objectives in the pre-1998 period when most of the non-cancelled portion of the loan was disbursed, but it did accomplish its restructured objectives once the project was scaled down, hence the PPAR's higher rating. Through training, technical assistance and other inputs, the NBEP developed the capacities of federal agencies and subnational institutions along the border in environmental management and enforcing compliance with environmental legislation. Significant achievements were also made for the protection of biodiversity. The restructured project's *sustainability* is rated *likely*, as the GOM has expanded the size of the national agencies, and some state and municipal institutions are now receiving financing from their respective state budgets. The NBEP's *institutional development impact* is rated *high*, given that the environmental agencies, which hardly existed at the municipal level before the project, are now able to fulfill their responsibilities at high standards. *Bank performance* is rated *unsatisfactory* due to the overambitious design of the original project and the adverse effect that the several changes of Team Leader during supervision had on country stakeholders. *Borrower performance* is rated *unsatisfactory* owing to the consistently inadequate and delayed disbursements, and the major institutional restructuring that disrupted the project.

The Environmental Structural Adjustment Loan (EnvSAL I), approved in FY2002 and completed in FY2004, is the first in a series of three programmatic structural adjustment loans. The main objectives of EnvSAL I were to support the Government's efforts to (i) mainstream environmental concerns in the development agenda of key sectors, and (ii) improve the efficiency and effectiveness of local environmental management processes in Mexico.

The *outcome* of EnvSAL I is rated *satisfactory*, since it fully achieved its objective of mainstreaming environmental concerns in the water, tourism, energy and forestry sectors, as well as between these agencies and the Secretariat of Environment (SEMARNAT); it also facilitated greater effectiveness of policies and efficiency of practices within each of the sectors. The project's *institutional development impact* is rated *high*, given that the project created a forum for consultation, stakeholder participation and inter-sectoral coordination that did not exist effectively prior to the project. The EnvSAL I's *sustainability* is rated *likely*, as the institutional mechanisms established have been integrated into the sector agencies and are being expanded; moreover, the project's actions are based on the new environmental legislation. *Bank performance* is rated *satisfactory* owing to the high quality of project preparation and extensive supervision by a senior multidisciplinary team. The *Borrower's performance* is rated *satisfactory*, as the Government and the four targeted sectors displayed commitment to inter-

institutional cooperation despite the necessity to trim their other programs in order to implement EnvSAL I actions (the loan was not additional to the sector agencies' budgets).

The NBEP and EnvSAL I together offer the Bank some important lessons for its future assistance in strengthening the capacity of environmental institutions and as it tries new lending instruments (such as Development Policy Loans) to achieve this goal. These lessons, which also take into account the lessons of the earlier PPAR of the MEP, are as follows:

- Quickly capitalizing on narrow windows of political opportunity to accelerate the Bank's processing of large environmental infrastructure operations can be highly risky, since it can lead, as it did under the NBEP, to over-ambitious design, inadequately prepared implementing agencies and poor overall quality at entry, especially when political considerations are allowed to drive the preparation and appraisal timetable.
- Targeting project support for local agencies in more direct ways helps them assume more responsibilities and contribute in more measurable ways to environmental sustainability. This support needs to be concrete and under their control. In contrast, "top-down" approaches tend to focus on the broader enabling environment, but may neglect the lack of skills and resources at local levels, which hampers subnational agencies from delivering on their responsibilities.
- In cases where the processing triggers for the programmatic loans are different from interim results and final outcomes, these triggers should be clearly distinguished in the simplified ICRs. Final outcomes and impacts upon Program completion have to be keyed to measurable improvements in ambient environmental conditions. Otherwise, the whole program could remain "process-oriented", its benefits hard to measure and its value-added too ill-defined to garner broad-based support.
- Prior Government commitment *and* formal policies as well as a time-based plan are crucial prerequisites for the successful implementation of Environmental Development Policy Loans. Desired policy outcomes and practical constraints need to be clear in order to enhance dialogue and promote synergies. Where these conditions are present, the Bank can play an effective role by forging the cross-sectoral coordination and consultation mechanisms, jointly defining actions, monitoring delivery timetables, and providing analytical and advisory assistance to deliver the Government's own environmental program.

Ajay Chhibber
Acting Director-General
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1. Background

THE ENVIRONMENT IN MEXICO

Environmental Issues

1. In the 1980s, when Mexico began to address its environmental problems, the environment was suffering considerably due to air and water pollution, water scarcity, poor hazardous waste disposal, soil erosion and biodiversity loss. Industrialization was pursued with little attention to its environmental costs, and in rural areas, support was given to agricultural policies and subsidies that caused excessive natural resource use and increased rural-urban migration. Mexico's predicament is that its environmental degradation is the direct result of its main drivers of growth. The energy sector, for example, has been a principal source of national income, yet it generates considerable pollution, negatively affecting air and water quality and public health. These impacts will no doubt increase as Mexico's growth continues. Tourism as well has been an important source of growth, but it is now threatening the country's marine biodiversity. The high deforestation rate, due to weak forestry sector management, is causing not only significant biodiversity loss, but also adverse effects on the country's poorest groups. Similarly, problems exist in the water sector, which have resulted in inadequate water quantity and quality for a large segment of the population.

2. The northern border region, in particular, has had severe environmental problems due to its rapid industrialization and population growth. The adverse environmental impacts from international trade and investment in this area had increased.¹ Today, the environmental degradation has worsened to a level where it threatens future economic growth and social welfare in Mexico. While public environmental management capacity has improved to address the various problems, serious challenges remain for the Government, particularly in the area of investments in environmental infrastructure, removal of subsidies that encourage irrational resource use, and the application of innovative, market-based instruments for environmental management that go beyond the traditional command- and-control mechanisms.

Strategies, Legal Framework, and Institutions

3. Based on a solid foundation of environmental legislation, the Mexican Government in the late 1980s began taking various steps to strengthen its capacity in environmental management and governance, signaling increased attention to environmental issues. With a strategy essentially of consolidating its environmental institutions to better define the responsibilities of each level of government and to more effectively address the various issues, the government in 1985 created the Secretariat for Urban Development and Ecology (*Secretaría de Desarrollo Urbano y Ecología*, or SEDUE). SEDUE was to be responsible for addressing most of the environmental issues

¹ OECD Report on the State of Mexico's Environment, 2003.

under the federal domain, air and water quality monitoring and control, hazardous wastes and protected area management.

4. Specific management guidelines were lacking, however, so the government in 1988 passed the *Ley General del Equilibrio Ecológico y la Protección al Ambiente* (General Ecology Law), the country's principal environmental framework law. A key element of the Government's strategy and the goal behind the new legislation was to create a framework for sustainable development through intersectoral cooperation, increased social participation, and new and stronger environmental standards. Yet despite the progress achieved in developing a regulatory framework, numerous gaps and weaknesses remained. SEDUE faced serious limitations in carrying out its functions due to insufficient technical standards and criteria for environmental enforcement and assessments, and inadequate staff and infrastructure. This prevented it from fully enforcing pollution standards and conducting all the necessary environmental impact assessments at a high level of quality.

5. The Government's vision of environmental management and enforcement also placed significant importance on decentralization. The 1988 law in fact defined the respective roles of the federal, state and local governments in environmental protection and gave greater responsibility to states and municipalities. By the early 1990s, most states had promulgated their own environmental laws. However, considerable work still remained for SEDUE to decentralize many of its functions, and for the states to establish their own standards and monitoring systems.

6. To adopt a more proactive approach for environmental protection and sustainable development, Mexico continued to experiment with changing the structure of its environmental institutions. In 1992, the government fundamentally reorganized its environmental agencies. The bulk of SEDUE's responsibilities were divided among two new institutions, the National Institute of Ecology (*Instituto Nacional de Ecología*, or INE), in charge of policy development on environmental regulations and impact assessment, and the Office of the Attorney General for Environmental Protection (*Procuraduría Federal de Protección al Ambiente*, or PROFEPA), a new authority for regulatory enforcement. The agencies were part of a new Secretariat for Social Development (*Secretaría de Desarrollo Social*, or SEDESOL). Recognizing the need for greater coordination, the Government in 1995 revised the institutional structure once again by abolishing SEDUE and bringing together the programs and policies of the different agencies -- including INE, PROFEPA, and the National Water Commission (*Comisión Nacional de Agua*, or CNA) -- and various additional functions, under a single Secretariat for Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*, or SEMARNAT).

7. The country's entry in NAFTA and the OECD in the early 1990s also helped to spur the Government's move to a sustainable development agenda as Mexico had to meet new and higher commitments on environmental standards and compliance mechanisms, and gained a better appreciation of the economic opportunities that tourism and foreign investments offered. This was sustained by Mexico's subsequent entry into the Kyoto Protocol.

8. Environmental legislation continued to progress in the late 1990s, and in 1996 the General Ecology Law was strengthened with amendments to cover integrated pollution control for air, water and wastes, and to introduce a single environmental license for industries and natural resource use. In 2001, public participation and public access to environmental information emerged as important goals in the Government's environmental strategy, as amendments for these were passed. By this time, all of the states had developed their own environmental legislation as well.

9. Confronted by the country's increasing environmental problems and the threat they posed to future growth and social welfare, the Government formulated an agenda for environmental mainstreaming and environmental management improvement and incorporated it into the National Development Plan 2001-2006 (NDP), whose main goals are to enhance growth and competitiveness. The NDP is based on a conception of environment in a new way as a cross-cutting issue – or *transversalidad* -- as opposed to one that is sector-specific or linked only to social policy. It recognizes the links between environment and growth that would allow Mexico to utilize its natural resource endowment as a comparative advantage. In addition to the earlier environmental goals, the agenda calls for inter-ministerial cooperation for integrated environmental management and growth, incentives, resource valuation, and social participation. This laid the groundwork for the Bank's involvement in the programmatic Environment Structural Adjustment Loan.

THE BANK'S INVOLVEMENT

10. The following paragraphs trace the evolution of the Bank's support for strengthening environmental performance and management in Mexico. Over the almost 15-year period, there have been major shifts in the GOM's environment strategy and the Bank's lending approach, as well as significant restructuring of Mexico's environmental institutions.

The Environmental Project's Comprehensive Approach: Too Much, Too Soon?

11. In the early-1990s the Bank expanded significantly its support for physical assets and institutional capacity-building for environmental management. The Bank's environmental assistance was designed to improve resource use and productivity, and ensure the assessment of the social and environmental costs of potential investments. In 1992, the Bank approved the Mexico Environmental Project (MEP). OED conducted a field assessment of the project in 2000. The objectives of the MEP were to support the government's ability to carry out key environmental protection and management functions in the short term and to strengthen the institutional and policy framework in order for these functions to be carried out in a more efficient and decentralized manner in the future. Through its activities, the project targeted air pollution, water and sanitation, solid wastes, natural resources development, biodiversity protection, ozone protection, and other areas.

12. However, with the restructuring of environmental institutions in May 1992 (just one month after the MEP began its implementation), it was necessary to redirect the MEP's activities to the newly created agencies. This resulted in a scaling-down of the project's objectives, and the amendment of the Loan Agreement in 1993.

13. Despite the institutional restructuring and Mexico's 1994 financial crisis, the MEP contributed in some important ways. But these achievements were short of the already scaled-down goals of the project. The institutional development impact of the project was modest, important objectives like water pollution control were not achieved, and decentralization was delayed. Rather than used to tackle major environmental problems, OED's PPAR for the project pointed out that the project's resources were spent mostly on the salaries and operational costs of INE and PROFEPA. Weak performance was due to an unrealistic and inefficient project design -- comprising of a large collection of unrelated components -- that tried to address too many issues and lacked focus. As the PPAR pointed out (see the main lessons in Annex B), the MEP's failures illustrated the need, expressed in the Bank's 1999 Mexico Country Assistance Strategy, for Bank's lending to Mexico to move from carrying out activities to achieving goals.

The Northern Border Environment Project: Some Successes, but Serious Pollution Problems Remain

14. Given the delay in decentralization activities under the MEP, the Bank approved the Northern Border Environment Project (NBEP) in 1994 to help address the environmental problems that were particularly acute in the northern border region, by developing state-level capacity for environmental protection. Between 1988 and 1994, a large number of states had developed legislation to support environmental protection activities, but by 1994 none of the border states had yet developed a complete legal framework. State and local agencies were weak because they lacked legislative instruments, trained staff, equipment, and financial resources. At the federal level, PROFEPA required substantial investments and technical assistance to enforce the regulations since rates of infraction were much higher in the border area compared to the country average. As discussed in the evaluation section, NBEP remedied these institutional weaknesses to a considerable extent by providing PROFEPA and the local agencies with the resources they needed.

15. Mexico's increased attention to environmental protection in the 1990s led to notable progress in some areas, such as biodiversity conservation and air pollution control. Yet the magnitude of the problems remained large at the beginning of the present decade. Exposure to air pollution remained a severe threat to public health. Water supply, sanitation service and waste water treatment needs had not been met in rural areas. Water use remained unsustainable at the national level. Proper municipal-level hazardous waste management is yet to be developed. Biodiversity is still seriously threatened (in a country that ranks fourth globally in megadiversity). In fact, the persistent environmental degradation is estimated to have led to losses in welfare and growth opportunities of about 10 percent of GDP, and threatens to further reduce social welfare and increase poverty if not addressed.² Underlying these environmental problems

² OECD Report on the State of Mexico's Environment, 2003.

were also subsidies and lack of resource valuation that encouraged their unsustainable use.

The Environmental Structural Adjustment Loan: Moving Away from Project Activities to Policy Goals

16. In 2002, the Bank approved the programmatic Environment Structural Adjustment Loan (ENVSAL) to assist the Mexican Government in its agenda for environmental mainstreaming and improving environmental management, in support of the larger NDP. It also sought to enhance the efficiency and effectiveness of environmental management processes in order to enable a strong pace of growth. The environmental agenda of the NDP has targeted for mainstreaming four sectors, tourism, energy, forestry and water given their key roles for growth and their potential to constrain both growth and development based on the level of degradation within them. In these sectors, the Government aims to address the lack of a regulatory framework for decentralizing environmental management, inadequate financing for building capacity and improving management, the absence of public participation and the lack of transparency.

2. Northern Border Environment Project

17. The original objectives of the NBEP were to improve environmental conditions in Mexico's Northern Border area by assisting the federal government as well as the border states and municipalities in: (i) strengthening their environmental planning, management and enforcement capabilities; and (ii) carrying out priority investments and action plans to preserve the environment, reverse past environmental degradation and reduce health risks from environmental contamination. The project consisted of five components: (a) institutional strengthening; (b) hazardous wastes; (c) biological diversity and ecological areas; (d) street paving; and (e) infrastructure investment lines of credit. The loan amount at appraisal was for \$US 368 million equivalent, but due to several cancellations, the actual amount disbursed was only \$US 35.1 million.

IMPLEMENTATION ISSUES

18. The NBEP was approved in June 1994. Shortly after it became effective in June 1995, Mexico experienced a financial crisis. Since the Bank was already financing projects with similar components to NBEP (e.g., paving, solid waste management, water supply and sanitation), the Government between 1995 and 1996 requested cancellations of these activities in the NBEP amounting to US\$ 273.4 million. The loan amount decreased from the original US\$ 368.0 to US\$ 94.6 million.

19. In 1998, the project objectives were revised in an Amendment to the Loan Agreement, to reflect these changes and consolidate the numerous cancellations.³ The

³ Although the loan cancellations occurred in 1995-96, it was not until 1998 that action was taken to revise the project's objectives.

restructured objectives, which replaced the original ones, were to improve environmental and social conditions in the border states by: (i) assisting the government, as well as the border states and their municipalities, in strengthening their environmental management capabilities, including their capabilities for enforcing environmental legislation and regulations; and (ii) assisting the border states and their municipalities in strengthening their administrative, financial and other management capabilities in education, health, and water supply and sanitation. The hazardous waste, street paving and infrastructure investment lines of credit components were cancelled, and the focus of the project became institutional strengthening. Further loan cancellations totaling US\$ 54.6 million occurred in October 1999, July 2000 and December 2001 due to the Government of Mexico's budgetary constraints. Two other changes regarding the objectives were made after 1998. The biological diversity component was cancelled in 2001 when responsibility for protected areas was transferred from INE to the *Comisión Nacional de Areas Naturales Protegidas* (National Commission for Protected Areas, or CONANP) and the latter chose not to participate in the NBEP⁴, and the objective of strengthening the administrative, financial and management efficiency of the states and municipalities was cancelled. The loan closing date was also extended by two years to September 2003. At closing, the loan disbursed US\$35.1 million or 9.53 percent of the original appraisal amount.

RESULTS

20. NBEP's performance before the revision of the project objectives in 1998 was weak. During this period, US\$29.3 million had been disbursed. However, in the period from 1998 to closing, the project succeeded in achieving the first restructured objective. In some cases, the project surpassed its targets for this objective. The original set of objectives for the project was overambitious, supported by a large number of activities in several sectors, much like the Bank's 1992 Mexico Environmental Project. The scaling-down of the project permitted it to focus on the strengthening of Mexico's environmental institutions and on one area--biodiversity and endangered species conservation.

21. The NBEP supported a wide variety of methods and specific activities to achieve its restructured objectives. These consisted of: capacity building for staff at the federal, state and municipal levels of government, and for the private sector and NGOs; specialized studies in diverse areas; technical assistance for the preparation of plans and manuals; the creation of human resource systems; and provision of equipment and facilities.

22. Regarding the project's objectives of assisting the government, the border states and their municipalities in strengthening their environmental management capabilities, including those for enforcing environmental legislation and regulations, the project achieved several significant outcomes. Owing to the resources NBEP provided to PROFEPA and building on the results under the MEP (see para. 13), the agency's

⁴ The ICR refers to CONANP's decision in 2001 to cancel its participation in the NBEP as the cancellation of the component. Because the component was cancelled rather late in the project—2 years before closing—many of the activities had already been carried out with the allocations that had been disbursed, and had produced fairly significant outputs.

capacity for environmental enforcement at the federal and state levels was enhanced significantly as a result of its increased ability to carry out audits and inspections, and the creation of an integrated information management system, which assists the agency in monitoring compliance and decision-making. The agency is now recognized for its high-quality work both in Mexico and abroad. The project also enabled the states and municipalities to conduct their responsibilities under the decentralized framework of Mexican environmental law and engage actively in environmental and socio-economic planning. Other environmental management capabilities of the border states were improved as well, as plans for the protection of biodiversity and endangered species in protected areas of the region were developed. The main achievements of NBEP are presented in detail in Annex C. As mentioned earlier, the second objective, strengthening the administrative, financial and management efficiency of the states and municipalities, was cancelled.

23. With respect to the objective of decentralizing environmental management and legislation enforcement to the states and municipalities, the outcomes of NBEP were more significant compared to those of MEP, while EnvSAL I focused more on legislation and the charging of user fees. The table below compares the outcomes for decentralization of the three projects:

Project	Decentralization Objectives	Coverage	Specific Actions Involved	Outcomes
MEP Approved: 1992 Closed: 12/1997 (after 2-yr extension)	-Help GOM carry out environmental protection and NRM in a more efficient and decentralized manner. -Have states carry out environmental functions with federal government coordinating and assuring quality	5 states	-Equipment provision -Studies -After 94, greater emphasis on training.	-Partial achievement of objectives: due to crisis, no allocations by Government for decentralization of activities. Consequently, states could not assume responsibilities. -5 State Environmental Action Plans and 5 coordination agreements between Fed and States.
NBEP Approved: 1994 Closed: 9/2003 (after 2-yr extension)	-Strengthen institutional capacities of states and municipalities -Addressing constraints that hinder admin. efficiency & financial mgmt of local agencies (dropped)	Focus on border states, but other states participated as well.	-Equipment provision -Training and studies for development of regulations and standards.	-Strengthening of state and municipal agencies. -Improved monitoring and enforcement at these levels for compliance with legislation. -Ability of states and municipalities to carry out responsibilities under Mexican legislation. -Participation of agencies at these levels in environmental and socio-economic planning.
EnvSAL I Approved: 2002	-Creation of an enabling environment for decentralization of	National	-Legislation -Institutional mechanisms	-Increase in water fees collected at municipal level and increased incentives for

Closed: 12/2003 (after 2-mo. extension)	environmental management via changes in key laws. -Preparation of stepwise decentralization strategy (incl. means to ensure quality -financing for capacity building in states with plans to assume new environmental management functions.			water infrastructure investment. -Legislative changes to various laws to enable decentralization. -At least 6 states have begun decentralization of at least one or more environmental management functions, based on Environmental-Secretariat approved decentralization plans.
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24. The experience of the NBEP demonstrates that for countries with some environmental legislation in place, but with undeveloped environmental institutions and capacities, the provision of basic support, such as equipment, infrastructure, training, and technical assistance can have significant positive impacts on the capacity of the institutions for environmental management and enforcement.

25. The NBEP achieved most of its targets and in some areas, such as plant inspections, exceeded them. Yet in some cases, targets were not met: 23 studies for state and municipal institution development and 31 for biodiversity conservation were not conducted. Determining whether all the numerous targets were met remains challenging due to differences between the format used to present the project targets and that employed to record the outputs. It should also be noted that OED could find no evidence to support the statement in the ICR that environmental and social *conditions* in the border states have improved.

26. At the broader level, NBEP's success was in helping to raise the importance of the environment at the federal, state and municipal levels and focusing the new institutional capacities that it was developing on a specific geographic area of the country. Although the project initially tried to achieve too much, as it was proposed in the context of the NAFTA negotiations, the political support for it played a large role in its outcomes. Based on what the NBEP achieved and the overall assessments of the project by Mexican environmental officials, the NBEP played an important role in developing the capacities of the borrower's environmental agencies. However, the need for significant work along the northern border remains. OECD's 2003 assessment concluded that environmental conditions there were worse than they had been five years earlier.

27. Notwithstanding the positive results of the project, an issue arises related to the large number of studies and training activities that were intended to provide the knowledge or skills necessary for taking future actions. What remains unclear, however, is the extent to which they were utilized and their direct impact on (i) the performance of the environmental agencies and (ii) improvements in environmental management and enforcement in Mexico. As the OED assessment found for the MEP, which the NBEP came to resemble in its large number of sub-components, many of the studies conducted were never applied or added little value to institutional performance.

OUTCOME

28. Based on its substantial relevance, modest efficacy, and modest efficiency, the project outcome is rated *moderately unsatisfactory*, which is a higher rating than the unsatisfactory rating of the ICR and OED's ICR Review. (The moderately unsatisfactory rating is not available in the region's 4-point scale in preparing the ICR, per OP13.55 on Implementation Completion Reporting. OED has a 6-point scale.) The PPAR rating is based on an assessment of the project's results against both its original and revised objectives and on the ratings for relevance, efficacy, and efficiency discussed below. Separate outcome ratings (against original and revised project objectives) were weighted according to the share of the actual loan/credit disbursements made in the periods before and after approval of the revision. The major share of the US \$35.1 million loan, US \$29.24 million (83 percent), was disbursed before 1998, when the project objectives were revised. The remaining US \$5.85 million was provided after the revision. Although the outcome of the project's post-1998 period merits a rating of Satisfactory, the project's outcome during the period when the bulk of the loan was disbursed is rated Moderately Unsatisfactory. OED's ratings for relevance, efficacy, and efficiency, and its overall project rating is presented and discussed below.

Summary of Ratings for NBEP Objectives

Project Objectives	Relevance	Efficacy	Efficiency	Outcome
Original				
To strengthen the environmental planning, management and enforcement capabilities of federal, border-state and municipal environmental agencies	Substantial	Substantial	Substantial	Satisfactory
To carry out priority investments and action plans to preserve the environment, reverse past degradation and reduce health risks from environmental contamination	Modest	Modest	Negligible	Unsatisfactory
<i>Ratings Under Original Objectives</i>	<i>Substantial</i>	<i>Modest</i>	<i>Modest</i>	<i>Moderately Unsatisfactory</i>
Revised				
To strengthen the federal, border-state and municipal environmental agencies' environmental management capabilities, including in legislation and regulations enforcement	Substantial	Substantial	Substantial	Satisfactory
To strengthen the administrative, financial and management capabilities of border states and municipalities	Substantial	Negligible	Negligible	Unsatisfactory
<i>Ratings Under Revised Objectives</i>	<i>Substantial</i>	<i>Modest</i>	<i>Modest</i>	<i>Moderately Unsatisfactory</i>
Overall Project Ratings	Substantial	Modest	Modest	Moderately Unsatisfactory

Relevance

29. The rating for the relevance of the project's objectives overall and for each period, before and after the revision of the project objectives, is ***substantial***. In the pre- and post-1998 periods, the goals of the project were in general accord with the Bank's Country Assistance Strategy of improving the environment and with the Mexican government's long-term efforts to improve the effectiveness of its environmental institutions. However, the Government's decision to cancel the investment components, and thus the bulk of the loan, and pursue the goals of these components through other ongoing Bank projects⁵ signaled that the project did not entirely match the Government's priorities for Mexico's environment. It also meant that for the municipalities, for which the investment components were largely intended, the project no longer had the same degree of relevance as before. Partly because the NBEP grew to a significant degree out of the political atmosphere around the NAFTA negotiations, it was too ambitious: a large number of activities distributed across several sectors were involved while the capacities of the agencies and inter-institutional coordination for project execution were low. The project's sector focus also lacked adequate rationale: the environmental problems were not prioritized and the energy sector, a major source of pollution, was not among those targeted. Though project documents stated that the NBEP was relevant to the fulfillment of "Mexico's obligations under NAFTA", there were no obligations under NAFTA as such, except that the participating countries do not relax their environmental standards to attract increased foreign investments. The scaling-down of the project though made the new objectives more focused and relevant.

Efficacy

30. The project's efficacy in achieving its objectives is rated ***modest*** overall. For the period before the project objectives were revised as well, project efficacy is rated modest. Although the project was making good progress towards achieving the objective of strengthening the environmental management and enforcement capabilities of the Government and of the border states and municipalities, it was taking no action on the second objective of carrying out priority investments for environmental protection, the reversal of past degradation and the reduction of health risks from environmental contamination. The rating for efficacy in the period after 1998 is modest. As discussed under "Results" above, the project achieved the first revised objective (a slightly modified version of the first original objective) substantially. Efficacy in reaching the second revised objective though was negligible, as the decision was taken to no longer pursue it.

Efficiency

31. The project's efficiency overall and for the periods before and after 1998 is rated ***modest***. In the pre-1998 period, although implementation progress on the first objective was good, little action was taken on the investments for the second one to generate

⁵ Second Water Supply and Sanitation Project; Second Solid Waste Management Project; and Medium-Size Cities Urban Transport Project.

benefits. After the project was revised, the story was similar: the project's efficiency in achieving the objective for strengthening the environmental management and enforcement capacities was substantial, as the newly-created capacities were at a high level and were utilized as they were developed. In the case of the second revised objective, however, efficiency was poor since the objective was initiated but then later dropped, which resulted in a waste of resources. The modest rating of the project overall is also supported by the fact that the loan cancellations were delayed and incremental, which meant that the Government continued to pay commitment fees on the undisbursed amount until the cancellations were made.

INSTITUTIONAL DEVELOPMENT IMPACT

32. The rating for the project's institutional development impact is *high*. NBEP contributed significantly to the ability of the federal, state and municipal environmental agencies to carry out environmental management and enforcement activities in the border states and those in other areas of the country. It should be noted that the activities the project undertook or funded for institutional development were rather basic in that they enabled the agencies to conduct their most essential activities, such as audits, inspections, testing, and information management. Through studies, the project also generated the primary knowledge the agencies needed to take management and policy steps in the future. This was particularly true for institutions at the municipal level, which were incipient or non-existent. But given the relatively low level of capacity of all the environmental agencies before the project, NBEP's contribution was significant. The training, technical assistance, equipment and basic infrastructure supplied, and knowledge generated under the project led to the creation of environmental institutions at all three levels of government that were able to carry out the activities for which they were responsible in a more effective and efficient manner.

SUSTAINABILITY

33. The sustainability of the NBEP's benefits is rated *likely*. The various benefits the project generated are expected to continue due to the public recognition the environmental agencies have received for their functions, the capacity strengthening the project achieved, and the increased public awareness of environmental problems in the border region. PROFEPA and the agencies at the state and municipal levels are now recognized for the important functions they perform and the high quality of their work. Since project closing, these agencies have been performing well and have received resources that have allowed them to expand. Whereas earlier PROFEPA was dependent on financing from the NBEP, its budget is now derived entirely from its operations. Additionally, some state and municipal institutions along the border now receive financing from their respective state budgets and are no longer dependent on external funding. The commitment that the Government at all levels has shown since the project ended to developing these institutions is the basis for changing the Sustainability rating from "non-evaluable" in the ICR Review to "likely". One consequence of PROFEPA's greater independence should be noted though. The agency's dependence on its operations has led to a somewhat tight budget and the result of this has been the absence of new studies or equipment.

34. Capacity development has also played a strong factor in sustainability. Training on environmental management and regulation, which occurred in the NBEP through the agencies and universities, and has been carried out by these universities as an integral part of their curriculum after the project, has produced a large body of technically trained staff in the environmental agencies and individuals who can assume positions in the future in these agencies and non-governmental institutions. Finally, the increased public understanding, together with the improved capacity of NGOs and other institutions will serve to maintain pressure on the Government to continue financing public efforts to address the environmental problems in the border region and in states outside it.

BANK PERFORMANCE

35. The rating for Bank Performance is *unsatisfactory*. The project design was oversized as it sought to achieve major targets in several sectors that had serious environmental impacts (this resulted from the Bank's adoption of a multi-sectoral approach in one region—the northern border). Like the MEP that was initiated only three years earlier, the NBEP consisted of a large number of loosely related sub-components, the management of which would have been difficult. The Bank also addressed safeguard issues inadequately. Only a few Environmental Impact Assessments (EIAs) for subprojects were completed; moreover, as stipulated in the Bank's guidelines covering heavy industrial pollution and hazardous wastes, an EIA for the project as a whole should have been completed prior to appraisal but was not conducted. Quality at Entry was therefore unsatisfactory. The Bank's performance during supervision was satisfactory, especially given the challenges posed by the project's restructuring and major institutional changes in the environmental agencies. However, the changes in Task Managers (i.e., five team leaders from preparation to closing) and a lack of knowledge of Mexico on the part of some team leaders had an adverse effect on relations with country stakeholders.

BORROWER PERFORMANCE

36. Borrower Performance is rated *unsatisfactory* overall. During project design, the Government gave significant political support to, and worked closely with the Bank for the project due in large part to its association with the NAFTA negotiations and because it was seen as an effort to mitigate the environmental harm from increased trade and investment in the region. Further, the performance of the implementing agencies—BA NOBRAS, SEDESOL, INE, PROFEPA AND SEMARNAT – was satisfactory owing to their commitment and the support their management provided for the achievement of quality outputs.

37. Nevertheless, throughout the project, the *Secretaría de Hacienda y Crédito Público* (Secretariat for Finance and Public Credit, or SHCP) did not disburse allocations to the implementing agencies in a timely manner or follow the annual budget allocations to which it had agreed. The staff of the implementing agencies worked effectively with the Bank to try to overcome this problem and implement activities in the fiscal year that remained, but because of the SHCP's weak performance and the Government's delay in signing the Amendment to the Loan Agreement during the project's last phase, which

also held up disbursements, project implementation was nearly unsatisfactory, the project's closing date had to be extended by two years, and an additional undisbursed amount of US\$ 4.9 million had to be cancelled at project closing. Finally, in 2001, the Government reorganized the Environment Secretariat, transferring responsibility for the strengthening of state and municipal environmental agencies from INE to the Secretariat's Regional and Sectoral Environmental Unit. While this change was not nearly as great as the restructuring in 1992, which forced a major reorganization of MEP that had just started, it did disrupt the NBEP's implementation and indicated a lack of strong Government commitment to the project.

3. Environmental Structural Adjustment Loan I

38. The main objectives of the First Environmental Structural Adjustment Loan (EnvSAL I) were to support the Government's efforts to (i) mainstream environmental concerns in the development agenda of key sectors, namely water, energy, tourism and forestry, and (ii) improve the efficiency and effectiveness of local environmental management processes in Mexico. EnvSAL I was approved in 2002 for a loan of US\$202 million equivalent and closed on December 31, 2003. It was planned as the first in a series of three environmental programmatic structural adjustment loans to be disbursed over a five-year period (the second loan now under preparation is called a Development Policy Loan in accordance with the Bank's Operational Policy 8.60 on Development Policy Lending [DPL] issued in 2005). The goal of the EnvSAL Program as a whole is to support the Government's efforts, as outlined in its National Development Plan 2001-2006 (NDP), to balance socioeconomic development with environmental protection and improvement. The EnvSAL I loan consisted of two tranches, with the second one conditioned upon the ability of the Government to meet certain triggers. The most salient features of the operation (tranche conditions and waivers) are presented in Annex D.

DESIGN AND IMPLEMENTATION ISSUES

39. At the ICR Review stage for this project, OED raised several questions related to the content of the operation and the appropriateness of the SAL instrument. The evaluation mission's findings are discussed below.

40. *Why a programmatic adjustment operation and not other lending instruments?* An environmental management investment loan was considered, but the two previous projects (MEP and NBEP) were not successful with this type of instrument. A single environmental SAL, or SAL plus technical assistance (TA) loan were also considered, but there would not be enough time under a SAL to carry out the range of actions that comprise the whole Program, which follows the NDP's 2001-2006 timetable. Moreover, the timing between a fast-disbursing SAL and a longer TA would be mismatched, and the leverage diminished as the TA continues to disburse while the SAL is already closed. An environmental Sectoral Adjustment Loan (SECAL) was not selected, because this would involve a legal agreement only with SEMARNAT, and thus would not be suited to

mainstreaming environment into other sectors. A programmatic SAL linked to the *environmental* milestones of (i) the 2001-2006 NDP and (ii) the parallel Environment and Natural Resources Program 2001-2006, was deemed by the Bank as the most appropriate lending vehicle.

41. *How adequately do the Program and the first loan address Mexico's environmental priorities? Does the Program need to be revised?* Based on information in Bank documents and reports by other multilateral organizations (such as the OECD) on Mexico's environment, the EnvSAL Program and its first loan substantially address the country's environmental priorities. Two of the most important activities that the Program is supporting are municipal wastewater treatment and establishing water user fees. There are, however, some critical issues that the Program does not cover, such as agricultural expansion's threat to biodiversity and air pollution from the energy sector. It should also be noted that the issues in the energy and forestry sectors that do come under EnvSAL I are not addressed until the second or third operation. However, these features do not warrant a revision of the Program; moreover, focusing on committed sectors is an important lesson that should be learned from the failed examples of the overambitious MEP and NBEP, which tried to address all environmental issues across nearly all sectors.

42. *Why were enforcement or pollution fines and fees not included in designing the policy package of EnvSAL I?* The Program does to some extent include enforcement and the levying of fines for unsustainable resource use. Under the EnvSAL program's planned second and third operations, pilot schemes will be created in the water sector for identifying and fining (i) water users using water in excess of their rights, and (ii) dischargers who exceed their limits. In the forestry sector, EnvSAL I sought to address the issue of low enforcement (which enables heavy illegal logging) by separating regulatory from enforcement functions. Actions in the energy sector, however, are conspicuously absent, although the issue of subsidies is being addressed in another loan (see paragraph 45).

43. *Is the de-linking of the independent certification of states (for carrying out environmental permitting functions) from the decentralization process an important departure from the project's development objective?* During EnvSAL I's second tranche release, the Government requested a waiver of the condition related to the independent certification of environmental functions to be decentralized to the state level. (A full background is presented in Annex D on Tranche Conditions and Waivers.) Based on the OED mission's interviews, this partial waiver of a second tranche condition does not seem to be a material deviation for two main reasons. First, the earlier tranche condition was based on a "supermarket" approach to permitting functions, whereby states can pick and choose which permitting functions they want to assume via certification. However, this results in an anomalous situation where the least desirable functions are left to the federal government, and the states take over only the easy or popular ones. Thus, it is important to ask whether these permits make sense in the first place (there used to be 128, now trimmed down to 92), after which it may be more practicable and least-cost to cluster permits and transfer them as a "package" rather than "retail" them one by one. Second, the various approaches with different incentives also need to be tried, e.g., "fast-tracking" of some permits (e.g., the *Tramite Ambiental Unico*); promoting programs of continuous improvement in addition to or in lieu of ISO9001 and ISO14000 certification;

and electronic Environmental Impact Assessments, which obviates the need to decentralize this particular function. In sum, the reasons provided by the Simplified ICR seemed valid, and which agency obtains certification for which particular function would be best decided after the review and streamlining of various approaches to granting permits has been completed.

44. *Was the policy package too “thin” for the size of the loan?* Being the first of its kind financed by the Bank, there are no other operations with which to compare EnvSAL’s policy content. As discussed earlier, EnvSAL I sought to address many of Mexico’s environmental priorities by supporting the Government in its efforts to mainstream the environment in several important sectors, which is a challenging and novel approach for the country. In fact, for programmatic SALs, this question may not be fully relevant. Important prerequisites for these loans are the development of the policy reform agenda by the borrower accompanied by Government commitment. In the case of EnvSAL, the Mexican government formulated the environmental policy development goals and initiated actions for them prior to the Bank’s entry. For the EnvSAL I itself to have proposed and pursued a new policy package would have been unrealistic, as the loan period would allow too little time for formulating and legislating policy reforms. Borrower ownership, moreover, may not have been as strong. OED assessments of adjustment loans often refer to the need for a sound policy package and Government ownership (ideally evidenced by significant actions already having been taken) as important prerequisites to receiving Bank support.

45. *Why was the issue of subsidies in the fuel, power, water and agricultural sectors not addressed?* It appears that EnvSAL I and the Program as a whole have not sought to address the subsidies in these sectors for two reasons. First, other Bank projects in Mexico, from the late 1980s to the present, sought or are seeking to do so. Two projects, Agricultural Sector Adjustment Project I and II (1988), and the Integrated Irrigation Modernization Project (2003) addressed subsidies for water in the agricultural sector. The first one supported the Government in its efforts to reduce subsidies for water and other agricultural inputs, and promote a system of water user fees. In the second project, based on a process begun in 2001 of transferring the responsibility for operation and maintenance of irrigation infrastructure to water users' associations, one of the aims has been to improve on-farm irrigation systems and water use efficiency. Regarding the fuel and power sector, the Transmission and Distribution Project (1990) sought to reduce government subsidies to the petroleum industry and the cross subsidies to consumers to improve end-user efficiency. The second reason is that while subsidy issues remain, the first operation and the Program have aimed to support an agenda that the Government has outlined as achievable rather than a very broad one that includes all of the country’s environmental issues.

46. *Were the Bank’s environmental safeguard policies addressed adequately?* According to the EnvSAL Program Document (PD), the Bank project preparation team consulted a sizable body of analytical work on Mexico’s environment carried out by the Government of Mexico, the Bank, and other development institutions, including the OECD, to review the current state of environmental policies. This seems more than adequate to comply with the environmental safeguard policies for adjustment lending that prevailed when the EnvSAL program and the first operation were designed, i.e., that

while “adjustment loans other than SECALs are not subject to the requirements of OP 4.01 [Environmental Assessment]”, staff should (and did) review country environmental policies and practices, take account of any relevant findings and recommendations of such reviews, and identify the linkages between the various reforms proposed and the environment as good practice.⁶

RESULTS

47. The objectives of EnvSAL I were to support the Government’s efforts to (i) mainstream environmental concerns in the development agenda of key sectors, and (ii) improve the efficiency and effectiveness of local environmental management processes in Mexico. The results of EnvSAL I vis-à-vis these objectives are discussed immediately below. The overall outcome of EnvSAL I is *satisfactory* based on OED’s assessment of its relevance, efficacy and efficiency (as discussed in detail under the Outcome section).

Inter-Sectoral

48. The main result of EnvSAL I is the cross-sectoral mainstreaming of environmental considerations across four sector agencies (for energy, water, tourism and forestry), the Environment Ministry (SEMARNAT) and the Finance Ministry (SHCP). This is discussed in detail in the Institutional Development Impact section below.

Water Sector

49. The main targets for the water sector were achieved, as follows:; (i) the earmarking and return of municipal user fees to the municipalities for financing investments in water infrastructure on a matching basis, and (ii) modifications to the Federal Law of Rights on Water in order to incorporate the provision that up to 100% of municipal water fees collected may be returned to municipalities so that they could invest in water resources management programs. Under the EnvSAL I, revenues from water fees collected at the municipal level increased from 24% of concessional water use by volume to 58% by the second tranche release. These revenues were returned to the municipalities to finance water supply and sewerage systems on a matching basis. Levying of water fees signifies an important behavioral change under EnvSAL I, since the municipalities generally ignored this legal requirement in the past. EnvSAL I’s intent was to generate funds and stimulate municipal infrastructure investments, and not so much to conserve water resources.

⁶ The new operational policies for Development Policy Lending in 2004 have more stringent guidelines for safeguarding the environment: “... for country policies with likely significant effects [on the environment], the Bank assesses in the Program Document the borrower’s systems for reducing such adverse effects and enhancing positive effects, drawing on relevant country-level or sectoral environmental analysis. If there are significant gaps in the analysis or shortcomings in the borrower’s systems, the Bank describes in the Program Document how such gaps or shortcomings would be addressed before or during program implementation, as appropriate.”

50. Prior to Bank approval of EnvSAL I, the National Water Commission (CNA) had already designed and initiated the implementation of a 2001-2006 National Hydraulic Program (NHP) that established medium-term goals, set up the key building blocks to achieve those goals, strengthened coordination and consensus-building among stakeholders, and measured progress and impact systematically. In support of the Government's program, EnvSAL I included the NHP in its matrix of objectives, as well as in the Environment and Natural Resources Program.

51. In terms of specific actions, EnvSAL I established an Intersectoral Working Group (ITWG) for the water sector, and supported legal reforms to (i) increase the incentives for water conservation, and (ii) mobilize resources for investments in municipal water infrastructure by rationalizing and increasing the collection of water fees. Two important EnvSAL achievements in the water sector include the following:

- By presidential decree, past debts to the federal government were exonerated for municipalities who agree to (i) charge water fees in the future and (ii) forgo federal funding for water supply and sanitation in the event of non-payment
- Through the passage of a federal law,⁷ up to 100% of municipal water fees collected may be returned to the municipalities for water supply and sanitation investments, to be matched by an equal amount of municipal funds.

52. As a result, water users in municipalities with greater than 2,500 inhabitants and in the Federal District paid for water fees corresponding to 58% of concessioned water use by volume at the end of the third trimester of 2003, compared to the baseline of 24% in 2002. Moreover, the Ministry of Finance returned over 95% of water fees paid to the CNA for use by the municipalities. The OED mission reviewed the latest figures for 2004 and was able to confirm that the rate of payments remained stable and the transfers are about the same as the previous year at 92%.

Energy Sector

53. The main targets for the energy sector under EnvSAL I were achieved, which involved mainly goal-setting and networking. Specific actions to implement policies and strategies were still at the planning stages when EnvSAL I closed and would be pursued under the second loan. Under EnvSAL I, the Government designed a program to integrate environmental considerations in the energy sector, with medium-term goals and the necessary building blocks. Mechanisms for coordination and consensus-building were also established, notably the ITWG. A monitoring and evaluation (M & E) system to measure implementation progress and environmental impacts was also designed and would be put into operation once a program of specific actions start to be implemented by the end of the second operation, as follows:

- Develop an energy and environment policy
- Strengthen policies to promote clean fuels (e.g., lower the sulfur content in regular and premium gasoline to 300 ppm and 50 ppm by weight, respectively)

⁷ Ley Federal de Derechos en Materia de Agua

- Ensure the sustainable operations of energy facilities, and specifically to reduce contamination by PEMEX and the Federal Electricity Commission (CFE)
- Promote regulatory compliance by energy businesses
- Increase the renewable energy generation capacity to 1700 MW
- Promote energy efficiency to capture energy savings of 2.5 % relative to total consumption
- Promote socially sustainable energy projects
- Mitigate greenhouse gases through carbon capture projects

54. Some initial steps have been taken in 2004 to launch the foregoing set of concrete actions that eventually could have measurable environmental impacts. These mainly relate to renewable energy, as follows:

- Preparation and ongoing discussions in Congress of a national law to promote renewable energy (including geothermal)
- Approval of fiscal provisions for the accelerated depreciation of capital costs for renewable energy infrastructure
- Preparation of a study to develop a National Fund for Renewable Energy Promotion, which will (i) assess incentives for independent power producers, and (ii) evaluate alternative policies for pricing and power transmission
- Reduction by PEMEX of the sulfur content of premium gasoline in the Mexico City Metropolitan Area, and drafting of legislation that will legally bind the Government in the coming years to reduce the sulfur content of all gasoline and diesel
- Implementation of environmental management systems (EMS) in PEMEX and CFE, which is the public utility providing electricity to 90% of the population.

Note that during the preparation of the Second EnvSAL, the targeted sulfur content limits that will be implemented during the second operation were revised to 500 ppm and 300 ppm for Magna (regular) gasoline and Premium gasoline, respectively.

55. Some measurable impacts have started to emerge from these interventions. The EMS has led to a 63% reduction in flared natural gas, whose contribution to electricity generation has increased from 22% to 37% by substituting for fuel oil. There have been 15% and 18% reductions in SO₂ emissions from the electricity generation subsector and more generally from fossil fuel combustion, respectively. Finally, PEMEX has reduced its waste discharges to water bodies by 51%, and both PEMEX and CFE have made significant reductions in discharges of PCBs.

56. It is unclear whether these actions will be completed – and their measurable environmental impacts achieved -- by the end of the 6-year National Development Plan (NDP) period of 2001-2006. The Bank and GOM will track the progress on them. The FY2006 second loan operation may facilitate further progress on the above list, but is unlikely to see their completion. Even if these actions are completed during the third loan, that would represent a delay in implementing the Government's energy and environment plans during the NDP period.

Tourism Sector

57. As in the water and energy sectors, EnvSAL I supported the definition of medium-term goals and building blocks to achieve them, strengthened inter-agency coordination and stakeholder consultation, and developed systems to measure impacts. Also as in the water and energy sectors, the tourism sector already had a 2001-2006 National Program for Tourism that preceded the FY2004 EnvSAL, and which emphasized environmental mainstreaming. An ITWG for the tourism sector was also formed. Specifically, EnvSAL supported the following:

- Legal reforms to decrease over-exploitation, improve operations and increase investments in national tourism resources through direct and indirect charges
- Approval by Congress of user fees to maritime activities, protected areas and whale-watching, and earmarking of the revenues for reinvestment in the tourism resource that generated the revenue

58. These reforms resulted in a 200-fold increase in marine park revenues, and in the re-channeling of user fees for the management of marine protected areas. The Government publicly discloses information on the amount of funds collected, in order to maintain transparency and improve environmental management. The Government has also implemented a set of indicators and benchmarks for measuring good environmental performance in tourism sector activities.

Forestry

59. The targets for the forestry sector were achieved. These goals were to develop the new legal framework for the sector, and to create the basis for an adequate valuation of the resources, including the payment for environmental services. EnvSAL I supported the medium-term priorities of the 2001-2006 National Forest Program through regulatory and policy reforms, creation of a publicly accessible planning and information system, increased employment and income generation for forest dwellers, biodiversity conservation while promoting sustainable exploitation of forest resources, improved definition of property rights, and decentralization of forest management.

60. A key component of this process is the valuation of environmental services, and the creation and development of markets for such services (for which a study was recently concluded). To these ends, the Government promulgated in 2003 the General Law for Sustainable Forestry Development, which sets national and subnational roles and responsibilities for the conservation, protection, production, harvesting and management of Mexico's forest resources. To ensure that forested area changes yield positive results, the Government also updated the legal and administrative procedures for changing land use.

OUTCOME

61. Based on the foregoing results and the assessment of relevance, efficacy, and efficiency that follows, the overall outcome of EnvSAL I is rated *satisfactory* as shown below.

Summary of Ratings for EnvSAL I Objectives

Project Objectives	Relevance	Efficacy	Efficiency	Outcome
To mainstream environmental concerns in the development agenda of key sectors	High	High	Not Rated	Satisfactory
To improve the efficiency and effectiveness of local environmental management processes	High	Substantial	Not Rated	Satisfactory
Project Ratings	High	High	Not Rated	Satisfactory

62. It is important to analyze what accounts for this outcome. OED's evaluations often derive lessons on the importance of country commitment as a key factor of good performance. In the case of EnvSAL I, which was disbursed in FY2003, country ownership of the agenda significantly preceded the loan in that the Government already had a National Development Plan 2001-2006 (NDP). In line with the NDP, SEMARNAT also prepared an environmental policy – the Environment and Natural Resources Program 2001-2006 (ENRP)—which emphasizes the mainstreaming of environmental sustainability principles in the actions of ministries and other institutions in various economic sectors. A key component of ENRP is the program developed by SEMARMAT – called the Program to Promote Sustainable Development in the Federal Government (PPSD) – which aims to improve the environmental sustainability of 16 ministries and agencies based on specific goals. The ENRP was expanded in 2004 to include Public Policy Trans-sectoral Agendas for Sustainable Development, which incorporate environmental sustainability goals for 32 public institutions.

63. While it is essential to have the country in the leadership role, this presents evaluation challenges in that it is difficult to attribute outcomes directly to the Bank's interventions. Indeed, many of the EnvSAL I actions were already being initiated in 2001 when the loan was being designed. For example, in 2001 (one year before EnvSAL I), the Ministry of Energy (SENER) had already embarked on an Energy Sector Program, which includes objectives to increase energy efficiency, produce a higher percentage of energy from renewable resources, and implement environmental management programs in facilities for oil and gas extraction and processing, as well as electricity production, transmission and distribution. Then, in 2002, SEMARNAT and SENER jointly developed the Environment Program for the Energy Sector, which includes environmental sustainability goals to be included in the energy sector's commitments under the 2001-2006 NDP. Although the Bank and GOM jointly determined which sectors would be supported under the Program, many of the energy sector's environmental policies and planned actions (described in the preceding section on Results), and those of other sectors were conceptualized or initiated prior to EnvSAL I.

64. It is important, therefore, to be clear whether performance is being assessed in terms of the project having led to (i) results on the ground, *or* (ii) the creation of a “policy space” or forum for coordination and consultation processes designed to lead to concrete results later. Given OED’s objectives-based methodology, an important guide is the EnvSAL’s Program Document, which indicates that EnvSAL, even in its third operation, does not aim in its outcomes for measurable reductions in environmental degradation, but rather for the establishment of different kinds of stakeholder processes. Consequently, for the purposes of this evaluation, the objective framework is keyed to processes, rather than actual environmental indicators.

65. For future environmental programmatic loans, however, final outcomes upon Program completion should be keyed to measurable improvements in specific geographic areas. Moreover, for purpose of assessing the achievement of objectives, it is best if processing triggers are clearly distinguished from both final and interim outcomes. *For Development Policy Loans in general, triggers should not be presented as outcomes in the Simplified ICRs for each interim operation.* (For the Mexico EnvSAL I, in some cases, the final outcome indicators were identical to the indicators associated with the triggers.) Otherwise, a program can consist of achieving only processes, the benefits of which are hard to measure and for which broad-based support can be difficult to sustain.

Relevance

66. The relevance of the EnvSAL program and this first operation is rated ***high***. This first loan directly support actions that promote environmental sustainability, which is one of the three pillars of the 2004-2007 Country Assistance Strategy (CAS) for Mexico. The loans also support the Government’s Program for Promoting Sustainable Development in the Federal Government.

Efficacy

67. The efficacy of EnvSAL I in achieving its objectives is rated ***high***. The operation resulted directly in the mainstreaming of environmental considerations across sector agencies, as well as between these agencies and SEMARNAT and the Finance Ministry. This high-level inter-institutional coordination, consultation, stakeholder participation, and the resulting synergies in environmental policies and action plans did not exist effectively prior to the project. But can the individual *sector* outcomes discussed above under the Results section be attributed to EnvSAL I? Only indirectly. The sector-by-sector environmental strategies pre-existed EnvSAL I, and while the operation facilitated their implementation and cross-sectoral coordination, many of the specific actions would have proceeded in some form without the EnvSAL.

Efficiency

68. Since this is an adjustment operation with no physical components, the rate of return calculations that are required for regular investment projects do not apply and thus efficiency is ***not rated***. However, it should be noted that the EnvSAL’s preparation and appraisal costs were high. There were two preparation missions conducted by nine

specialists. Supervision was equally intensive – five were conducted during the one-year disbursement period. Since this is the first programmatic loan of its kind, there are no available comparators for cost efficiency. Such comparisons should be possible once the ICRs for similar operations become available.

INSTITUTIONAL DEVELOPMENT IMPACT

69. The project's Institutional Development Impact is rated *high*. EnvSAL I resulted in the establishment of mechanisms for inter-institutional coordination between SEMARNAT and the water, energy, tourism and forestry sectors. EnvSAL I created a common forum where intersecting issues or closely related areas of work could be coordinated among these agencies, without necessarily imposing common approaches. For the four sectors and the Ministry of Finance, EnvSAL I set specific targets with clear deadlines, several of which were linked to ongoing programs and some stemming from new discussions. Whereas before, each sectoral agency handled environmental problems in isolation, EnvSAL I initiated the consultative process of identifying policy gaps and developing comprehensive solutions that involve disciplined approaches to negotiations among the sector agencies concerned. EnvSAL I created the forum that allowed permanent dialogue among powerful sector agencies at the time when environmental policy guidelines were being formulated. Fiscal instruments (e.g., water fees and charges) were jointly designed by the sector agency and the Ministry of Finance. These EnvSAL I processes had the additional benefit of promoting *transparency and accountability* in environmental decision-making that cuts across sectors. EnvSAL I also forced SEMARNAT to dramatically update its operations to match the adjustment loan's environmental *mainstreaming* objectives.

SUSTAINABILITY

70. The EnvSAL's sustainability is rated *likely*. The institutional mechanisms that were put in place are fully operational and have been integrated in each of the sector agencies operations, staffing and budgeting processes. The actions were not *ad hoc* but were based on the promulgation or amendment of requisite laws and regulations, some of them requiring approval at the highest levels of Government. The transfer of resources to municipalities from user fees in the water and forestry sectors continues and backed up by agreements between participating municipalities and the federal government. More broadly, the EnvSAL I's outcomes laid the groundwork for further actions that will be pursued under two further Bank lending operations, under the umbrella of the Government's 2001-2006 National Development Plan.

BANK PERFORMANCE

71. The Bank's performance is rated *satisfactory*. The program and the first loan were prepared and supervised (albeit at high costs) by a large multidisciplinary team, which included specialists in environmental management, engineering, law and economics; water resources management; energy economics; financial management; urban planning and operations. The Bank's approach also reflected learning from past projects. As the MEP's PPAR pointed out, the Bank must realize that the institutions are

likely to continue evolving, as governments try different approaches to environmental management, and that determining the direction and pace of institutional development are largely the country's management culture and current political agenda. A 1999 Bank study on the issue in fact questions the ability of the Bank's project-by-project approach to make a difference as the country learns and adapts its environmental management institutions over the long term.⁸

72. Mexico's EnvSAL I was the first programmatic environmental structural adjustment loan, but it would be important to compare its costs with other loans of this kind (once completed) to determine whether the costs were excessive. One area where the Bank could have done better was in its own internal coordination among sectors and units working on the environment. Portfolio and project pipeline activities in the water sector and under the Global Environmental Facility financing (particularly those on renewable energy) were not linked effectively vis-à-vis the EnvSAL program. More strategic coordination and financial leveraging could have resulted in a greater impact in achieving the EnvSAL's matrix of program objectives.

BORROWER PERFORMANCE

73. The Borrower's performance is rated *satisfactory*. There was some resistance to dialogue and cooperation initially, partly because EnvSAL I (or any foreign loan) did not result in increased funding for the sector agencies. However, a major sign of Government commitment is the past and continued interest of the sector agencies to participate in the full EnvSAL program,⁹ despite the fact that under the rules of the Secretariat of Finance the loan funds are non-additional to their budgets, and they have to trim other programs to implement EnvSAL actions. Collecting water fees and charges is a difficult political issue, but this measure was presented by the Ministry of Finance and approved by Congress. The partnership between the Borrower and the Bank was evident. Establishing dialogue across sectors, which did not exist before, is hard to establish and required political astuteness and a systematic approach, respectively the Government's and the Bank's role.

CONCLUSIONS AND LESSONS LEARNED

74. To achieve a strategic perspective spanning almost 15 years of Bank involvement in Mexico's environment, the over-arching lessons presented below were based on the MEP, NBEP and EnvSAL I taken together. The project specific lessons of the MEP, from the PPAR on the project, are provided in Annex B. The main lessons of this assessment are:

- Quickly capitalizing on narrow windows of political opportunity to accelerate the Bank's processing of large environmental infrastructure operations can be highly risky, since it can lead, as it did under the NBEP, to over-ambitious design,

⁸ Margulis S. and Vetleseter T. (1999) *Environmental Capacity Building: A Review of the World Bank's Portfolio*. Environmental Department Paper No. 68.

⁹ That is, EnvSAL I and the second loan under preparation.

inadequately prepared implementing agencies and poor overall quality at entry, especially when political expediency is allowed to drive the preparation and appraisal timetable.

- Targeting project support for local agencies in more direct ways helps them assume more responsibilities and contribute in more measurable ways to environmental sustainability. This support needs to be concrete and under their control. In contrast, "top-down" approaches tend to focus on the broader enabling environment, but may neglect the lack of skills and resources at local levels, which hampers subnational agencies from delivering on their responsibilities.
- In cases where the processing triggers for the programmatic loans are different from interim results and final outcomes, these triggers should be clearly distinguished in the simplified ICRs. Final outcomes and impacts upon Program completion have to be keyed to measurable improvements in ambient environmental conditions. Otherwise, the whole program could remain "process-oriented", its benefits hard to measure and its value-added too ill-defined to garner broad-based support.
- Prior Government commitment *and* formal policies as well as a time-based plan are crucial pre-requisites for the successful implementation of Environmental Development Policy Loans. Desired policy outcomes and practical constraints need to be clear in order to enhance dialogue and promote synergies. Where these conditions are present, the Bank can play an effective role through environmental Development Policy Loans by forging the cross-sectoral coordination and consultation mechanisms, jointly defining actions, monitoring delivery timetables, and providing analytical and advisory assistance to deliver the Government's *own* environmental program.

Annex A. Basic Data Sheet

NORTHERN BORDER ENVIRONMENT PROJECT (LOAN NO. 3750)

Key Project Data (amounts in US\$ million)

<i>Project Cost by Component</i>	<i>Appraisal estimate</i>	<i>Actual</i>	<i>% of appraisal</i>
Institutional Strengthening	172.00	34.67	20%
Hazardous Waste Management	15.00	0.82	5%
Biological Diversity and Ecological Areas	15.00	2.96	6%
Street Paving	344.00	2.60	1%
Infrastructure Investment Lines of Credit	216.00	20.80	10%
Total project costs	762.00	59.85	8%

Cumulative Total Actual Disbursements (amounts in US\$ million)

<i>Loan</i>	<i>FY94</i>	<i>FY95</i>	<i>FY96</i>	<i>FY97</i>	<i>FY98</i>	<i>FY99</i>	<i>FY00</i>	<i>FY01</i>	<i>FY02</i>	<i>FY03</i>	<i>FY04</i>
3750S			28.29	29.24	29.24	29.24					
3750A							1.55	1.61	3.47	4.27	5.85
Final Date of Disbursement	September 29, 2003										

Project Dates

	<i>Original</i>	<i>Actual</i>
Appraisal		05/16/1994
Board approval		06/09/1994
Effectiveness	09/12/1994	06/21/1995
Mid-Term Review	05/16/1997	06/16/1997
Closing date	09/30/2001	09/29/2003

Staff Inputs (staff weeks)

<i>Stage of Project Cycle</i>	<i>Actual/Latest Estimate</i>	
	<i>No. of Staff weeks</i>	<i>US\$('000)</i>
Identification/Preparation	145.3	447.4
Appraisal/ Negotiations	35.4	118.2
Supervision	194.3	484.0
ICR	9.0	30.5
Total	384.0	1,080.1

Mission Data

	Date (month/year)	No. of persons	Specializations represented	Performance rating	
				Implemen- tation Progress	Develop- ment Progress
Identification/Preparation	May 1993 (identification)	5	DIVISION CHIEF (1); ENV. SPECIALIST-WATER (1); ENV. SPECIALIST (1); ENV. ECONOMIST/TASK MANAGER (1); RESEARCH ASSISTANT (1)		
	July 1993 (preparation)	17	ENV. SPECIALIST (3); ENV. SPECIALIST-AIR POLLUTION/TRANSPORT (1); URBAN SPECIALIST (1). OTHER STAFF AND CONSULTANTS (12)*		
	September 1993 (pre-appraisal)	10	TASK MANAGER (1); ENV. SPECIALIST- HAZ. WASTE (1); URBAN SPECIALIST (1); TRANSPORT SPECIALIST (1); OPERATIONS ADVISER (1); OTHER STAFF AND CONSULTANTS (5)		
Appraisal/Negotiation	July 1994	25	TASK MANAGER (1); ENV. SPECIALISTPROTECTED AREAS (1); ECONOMIST (1); ADMIN. ASSISTANT (1); OTHER STAFF AND CONSULTANTS (21)		
Supervision	July 1994	3	TASK MANAGER (1) ENV. SPECIALIST- HAZ. WASTE (1); ENV. SPECIALIST (1).	S	S
	September 1994	4	TASK MANAGER (1) ENV. SPECIALIST- HAZ. WASTE (1); ENV. SPECIALIST (1)	S	S
	January 1995	2	TASK MANAGER (1); ENVIRONMENT SPECIALIST (1)	S	S
	October 1995	1	URBAN TRANSPORT ENGINEER (1)	U	S
	March 1996	5	TEAM MANAGER (1); ENV. SPECIALIST (1) WATER SPECIALIST (1); SOLID WASTE SPECIALIST (1); INFRASTRUCTURE/FIN. SPECIALIST (1)	U	S
	June 1996	2	ENV. SPECIALIST (2)	U	S
	July 1997	4	INFRASTRUCTURE/FIN. SPECIALIST (1); PROCUREMENT SPECIALIST (1); URBAN DEV. SPE (1); TM/ENV. SPECIALIST (1)	S	U
	Nov. 1997	1	TASK MANAGER / ENV SPECIALIST (1)	S	U
	July 1998	2	TEAM LEADER (1) / ENV. SPECIALIST (1)	S	S
	October 1998	2	TEAM LEADER (1) / ENV. SPECIALIST (1)	S	S
	June 1999	4	TASK MANAGER (1); ENV. SPECIALIST (2); NATURAL RESOURCES MANAGEMENT SPECIALIST (1)	S	S
	November 1999	2	TEAM LEADER (1) / ENV. SPECIALIST (1)	S	S
	February 2000	1	ENV. SPECIALIST (1)	S	S
March 2000	1	TEAM LEADER (1)	S	S	

	<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Specializations represented</i>	<i>Performance rating</i>	
	October 2000	2	TTL- ENV. SPECIALIST (1) ENV. SPECIALIST (1)	S	S
	February 2001	2	TTL - ENV. SPECIALIST (1); ENV. SPECIALIST (1)	S	S
	November 2001	4	ENV. SPECIALIST (1); DECENTRALIZATION SPECIALIST (1); ENV. ECONOMIST (1); TTL- ENV. SPECIALIST (1)	S	S
	March 2002	3	TTL - ENV. SPECIALIST (1); ENV. SPECIALIST (1); SECTOR LEADER (1)	S	S
	November 2002	3	TTL-ENV. SPECIALIST (1); ENV. SPECIALIST (1); SECTOR LEADER (1)	S	S
	March 2003	2	TTL-ENV. SPECIALIST (1); ENV. SPECIALIST (1)		
ICR	July 2003	2	TTL-ENV. SPECIALIST (1), ENV. SPECIALIST (1)	S	U

*Preparatory missions included joint missions with the supervision of the Mexico Environmental Program, or *Proyecto Ambiental de México (PAM)*.

ENVIRONMENTAL STRUCTURAL ADJUSTMENT LOAN (LOAN NO. 7136)

Key Project Data (amounts in US\$ million)

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>	<i>Actual as % of appraisal estimate</i>
Total project costs	202	202	100
Loan amount	202	202	100
Cofinancing	0	0	
Cancellation	N/A	N/A	
Institutional performance			

Cumulative Estimated and Actual Disbursements

	<i>FY2003 1st Tranche</i>	<i>FY2003 2nd Tranche</i>	<i>FYxx</i>	<i>FYxx</i>
Appraisal estimate (US\$M)	101	101		
Actual (US\$M)	101	101		
Actual as % of appraisal	100	100		
Date of final disbursement:	December 2003			

Project Dates

	<i>Original</i>	<i>Actual</i>
Initiating memorandum		
Negotiations	6/25/2002	6/26/2002
Board approval	7/25/2002	8/6/2002
Signing	9/28/2002	9/30/2002
Effectiveness	12/17/2002	12/17/2002
Closing date	10/31/2003	12/31/2003

Note: The Simplified ICR format does not provide data on staff inputs and mission dates and composition.

Annex B. Project-Specific Lessons

LESSONS OF THE MEXICO ENVIRONMENTAL PROJECT 1992

- **Project designs need to be focused.** The MEP was an extreme case of trying to cater to too many demands. A design that has many deliverables and many detailed activities is a good sign of a project lacking a core group of objectives. High level of complexity invites micromanagement and hinders the flexibility needed to accommodate changes during the project cycle.
- **Expect surprises, particularly in the environmental sector.** Project risks are routinely treated as incremental within a few percentage points around expected values. Few analyses face up to the risk of major surprises. No one would blame the MEP for not anticipating Mexico's 1995 financial crisis, but it is difficult to understand how it could have overlooked the signs and directions of the 1992 and 1995 institutional reforms in Mexico's environmental sector. The fact is that changes in institutional arrangements have been the norm for environmental institutions around the world during the past 20 years as governments try different approaches to handle this new area of government. The chance of major changes in the institutional framework should be acknowledged in the design of institutional strengthening projects.
- **Major changes in a sector need to be done in tandem with adjustments to the national policy.** The project ICR correctly points to the difficulty of fostering decentralization of one sectoral agency if it does not make part of a general government decentralization policy.
- **Move from financing activities to financing goals.** The Bank's 1999 Country Assistance Strategy for Mexico makes the point that Bank lending to the country should move from activities to goals. Environmental projects usually encompass many small activities that are ill suited to traditional Bank procedures. Such projects would be good candidates for the Bank's Adaptive Program Lending (APL), whereby full slices of the project are cleared in advance and the emphasis moves to auditing the outcomes and away from tracking progress in myriad intermediate activities.
- **Bank staff, and staff at the local agencies, should be better aware of their counterpart operational frameworks.** Conflicts and misunderstandings between the country and the Bank legal and administrative frameworks were a usual source of friction and delay throughout the project cycle. These difficulties were sometimes exacerbated by high rotation of the Bank staff assigned to the project. Complex projects should acknowledge the cost of these problems and seek ways to address them. In these regards the recently enlarged Bank country office in Mexico is well positioned to help negotiate these situations in future projects.

Annex C. Key Achievements of the NBEP

1. The project enhanced PROFEPA's capacity to enforce environmental regulations for industry and the natural resources sector through the development of auditing policies and practices, and an expansion of its ability to conduct audits and inspections in greater number and of improved quality. The number of industrial inspections, which focused on air quality and toxic wastes, increased from 1,000 per year before the NBEP to more than 12,000 per year for much of the project, totaling more than 99,000 by the NBEP's closure. Of these, more than 21,000 were conducted in the border region. In later years, the inspections were of higher quality, emphasizing critical compliance issues, which accounts for the decrease to roughly 7,000 per year. Follow-up action plans were implemented for a large percentage of the inspections. In the area of natural resources (forestry, wildlife, marine, protected areas and others) a total of 108,000 inspections were carried out.
2. NBEP helped to establish PROFEPA as an effective environmental enforcement institution recognized for its high-quality work. While private firms initially resisted audits, and the project had to finance them entirely in order for this project activity to continue, they were later willing to pay as obtaining a Certificate for Clean Industry became an incentive. PROFEPA's audits are now internationally recognized. Brazil is basing its environmental auditing on Mexico's and U.S.-based multinational corporations are requesting their Mexican affiliates to have PROFEPA conduct an audit to obtain Clean Industry Certificates. The project's original design could be criticized for not having targeted the energy sector, a major polluter. Yet under NBEP's audit sub-component, PEMEX, the large parastatal Mexican petroleum company, has been brought under public environmental scrutiny.
3. Contaminated site inventories for 15 states were completed, including the 6 along the border. Some of these sites were characterized for the development of rehabilitation measures. (However, one shortcoming surfaced after 2000, when responsibility over these sites was transferred from PROFEPA to INE. No funds existed for clean-up and the high costs at times equaled PROFEPA's entire annual budget. Thus, no clean-up project was pursued.)
4. The national Environmental Emergencies Center was created, along with a network to respond to environmental disasters. The network involves industry and government agencies at all levels in emergency response planning. The Center's creation was a major NBEP success PROFEPA's capacity to respond to environmental emergencies did not exist earlier.
5. The project resulted in a strengthened system to resolve public environmental complaints that are brought to the attention of PROFEPA. The system received a

strong public response and is resolving 85 percent of complaints with the help of an information management system.

6. The project led to the development of an industrial and natural resource inspection and surveillance information system, and a broader information management system, the Institutional System for Strategic Information (Sistema Institucional de Información Estratégica, or SIIE), under which all of PROFEPA's 32 information systems are integrated, to monitor regulatory compliance and enable improved decision-making. SIIE has significantly reduced costs and time for the 500-800 potential users among the inspectors and lawyers of PROFEPA. The agency, in fact, won prizes from INOVA and the Mexican Government for the SIIE, and the Bank is now trying to create such a system in Central America. Because it monitors enforcement activities, the system has significantly reduced corruption in environmental enforcement in Mexico.
7. NBEP resulted in the demarcation of 7 protected areas along the border and the development of management plans for 5 of these, for the protection of biodiversity and endangered species in this region. Supporting the management of these areas are key studies, equipment and permanent staff. The project also initiated activities for tourism, environmental education, sustainable resource use, and community participation.
8. NBEP also strengthened the institutional capacity of states and municipalities in the border region to enable them to conduct their environmental responsibilities under Mexican law. Technical assistance and training supported environmental departments in the formulation and implementation of regulations and standards, and infrastructure and equipment provision allowed quality testing for air, water and soil to occur. All the border states and 16 municipalities developed environmental action plans and are participating actively in environmental and socio-economic planning.

Annex D. EnvSAL I: Tranche Conditions and Waivers

Policy Area	Actions Completed for 1st Tranche	Actions Completed for 2nd Tranche
Ensure mainstreaming of environmental concerns in sectoral development agendas		
Target Setting and Inter-institutional Coordination	<p>National Environment and Natural Resources Program (ENRP) published, with President's endorsement, emphasizing the importance of mainstreaming environment in key economic sectors. ENRP fully consistent with the NDP</p> <p>Monitorable, medium-term targets developed and published in the ENRP by SEMARNAT and the concerned institutions for at least 4 key sectors (water, energy, tourism, and forestry) and targets confirmed with other sectors in high-level meeting, convened by Office of Planning/President</p>	<p>Intersectoral Technical Working Groups (ITWGs) established for each of the key sectors (water, energy, tourism and forestry)</p> <p>Adequate functioning of ITWGs as evidenced by outputs, namely (i) the development of working terms of reference (TORs) for the functioning of the ITWG, which shall include, at a minimum, (a) the scope of the work program, (b) coordination arrangements, and (c) monitoring arrangements to evaluate progress of first operation and internalize lessons for future intersectoral efforts; and (ii) the development of working TORs for activities expected to be carried out for EnvSAL II in each key sector</p>
Actions in Key Sectors		
Water	<p>Publication of National Water Program 2001-2006</p> <p>Presidential Decrees (published in <i>Diario Oficial</i>, 12/21/2000) issued to permit exoneration of past debts by federal government for municipalities which agree to pay water fees in future and agree to forgo federal funding for water supply and sanitation in the event of non-payment of fees</p> <p><i>Ley Federal de Derechos en Materia de Agua</i> (Article 23 1A) passed with proviso that up to 100% of municipal water fees collected may be returned to municipalities respectively, in accordance with an incentive scheme under which municipalities need to have an equal amount of funds invested in hydraulic programs</p>	<p>Payment of water fees by municipalities (greater than 2,500 permit inhabitants and the <i>Distrito Federal</i>) that account for 55% of municipal water use (by volume) in Mexico, compared with and a baseline of 24%</p> <p>At least 95% of water fees paid by municipalities (that have signed <i>convenios</i> with CNA) to SHCP are returned to CNA, and available for transfer to municipalities that comply with the conditions set out under the incentive scheme (Artículo 23 1A)</p> <p>Information on amount of funds returned, on a national aggregate basis, to municipalities available publicly</p>
Tourism	<p>Adoption by Congress of articles 198, 198a, 238-B of the <i>Ley Federal de Derechos</i> which allow for user fees for maritime activities, protected areas, and whale watching respectively, with provision for earmarking of revenue generated for reinvestment in the particular tourism resource generating the revenue</p>	<p>Twenty-fold increase in marine park revenues in 2002, compared with 2001 (baseline of 68,000 pesos), as a result of implementation of changes to article 198 of the <i>Ley Federal de Derechos</i></p> <p>Amount of funds collected from user fees for protected areas are published</p>
Improving the effectiveness of environmental management processes		
Decentralization of environmental management functions to sub-	<i>Ley General del Equilibrio Ecológico y la Protección al Ambiente, Ley</i>	

<p>national levels in a stepwise manner</p>	<p><i>General de Bienes Nacionales; Ley Forestal; and Ley General de Vida Silvestre</i> changed to enable decentralization of federal environmental management functions to sub-national levels</p> <p>Development of criteria (with respect to personnel and goods) that are necessary to assume environmental management functions presently under federal jurisdiction, to be decentralized this year, relating to selected toxic wastes, selected environmental impact assessment administration, conservation of soils, flora, fauna and forest resources, and coastal management</p> <p>Decentralization plans prepared by at least 20 States</p>	<p>ISO 9001-2000 certification of EIA and permits to be decentralized carried out by SEMARNAT's Sub-secretariat for Environmental Management</p> <p>Publication of all State decentralization plans that are approved by SEMARNAT</p>
<p>Financing</p>	<p>34 million pesos budget assigned for PDIA (federal grant program) to assist States to finance capacity building to assume new environmental management functions, and criteria for PDIA use modified to ensure that only those States that plan to assume new functions can apply</p>	<p>At least 10 states receive funding from PDIA</p>
<p>Public participation and transparency</p>	<p>Strategy developed to improve public access to information on EIA and permits (for example, through use of website) based on the recent passage of <i>Ley de Transparencia</i>.</p>	<p>Public disclosure of processing information on a pilot basis of the following environmental management functions carried out by SEMARNAT: EIA and permits (for transparency example, through website)</p>

The GOM met all but 3 of the conditions for the second \$US101 million tranche.

Partial waivers were requested for the following conditions:

1) *The establishment of Intersectorial Technical Working Groups (ITWGs) in the four sectors being composed of members with designated titles.* The ITWGs were established and are fully functional, yet a request for a partial waiver was due to the fact that a few of the titles for the members of the ITWGs as described in the EnvSAL changed during implementation. These changes were either to ensure more appropriate representation in the ITWG than was originally envisaged or due to reorganization of an agency. Nevertheless, in all cases, the positions are at the same organizational level as envisaged in the EnvSAL, continue to be with the same agencies specified in the Program, and perform the appropriate substantive functions.

2) *ISO-9001-2000 certification of EIA review and approval, forest fire detection and control and permit-issuance functions of SEMARNAT that are to be decentralized to the*

state governments from that agency. The request for the partial waiver was necessitated by legislative and staff changes concerning SEMARNAT. The majority of functions related to EIA review and approval and permits described in the EnvSAL were certified for the second tranche to be disbursed. The exceptions related to (a) forest fire detection and control, as this was transferred out of SEMARNAT to the Forestry Commission; and (b) non-timber reporting, which was delayed due to a decision taken to review permitting procedures with the purpose of combining some permits and changing the permit issuance process. The review resulted in the merging of some permits and the elimination of others. In terms of certification, the Government decided to de-link certification from the decentralization process. Certification is considered important to promote “continuous improvement” but is seen as less important in the process of assuring the quality of decentralization. The timing for certification will also depend on the timetable for consolidating permitting procedures.

3) *Public disclosure of processing information on EIA review and issuance of certain permits by SEMARNAT.* The majority of processing information of permits is disclosed on public websites. As under (2) above, the partial waiver for public disclosure was related to (a) forest fire detection and control, and non-timber reporting. It was deemed sensible to await completion of the review of permitting procedures before a system was set up to publicly disclose these procedures.

Annex E. Comments from the Borrower

Introduction

The objective of Loans 3750-ME and 7136-ME was the improvement of the environment through the strengthening of federal, state, and municipal institutions in charge of managing all matters related to the environment.

The original objectives of the Northern Border Environmental Project, which was approved in 1994, were to improve environmental conditions in the border area of northern Mexico through support to the Federal Government and the states and municipalities of the border region; the objectives of the Environmental Structural Adjustment Loan, approved in 2002, were aimed at supporting the efforts of the Federal Government to incorporate environmental aspects into the development programs of key sectors and improve the efficiency of local environmental management processes in Mexico.

Several agencies of the Federal Government participated in the development of these projects, working in a coordinated manner with state and municipal authorities according to their functions and responsibilities within the environmental sector, and as executing agencies of the loans, including SEMARNAT, PROFEPA, CONANP, SEDESOL, SECTUR, CNA, and SENER.

The following comments were submitted by the executing agencies through SEMARNAT—the country’s chief Secretariat on the environment—expressing their points of view with regard to the development of each loan. Finally there are some conclusions derived from the outcomes achieved, as well as the lessons learned during the implementation of these projects.

LOAN 3750-ME. NORTHERN BORDER ENVIRONMENTAL PROJECT (NBEP).

SECRETARIAT OF THE ENVIRONMENT AND NATURAL RESOURCES (SEMARNAT).

We consider that in the evaluation of the NBEP it is important to mention the economic and climatic conditions that prevailed during project implementation such as sharp devaluations of the peso and natural disasters that led to the reduction of the budgets assigned to the executing agencies. Also, there were structural changes in public funds, mainly with reference to municipal transfers on the one hand, which were channeled directly to the beneficiaries, thus preventing the Federal Government from making investments in infrastructure; and on the other hand, resources from foreign borrowing, which were no longer supplementary to the budget assigned to the agencies.

With regard to the training received by the staff of the agencies involved, the results are evident, especially in the States and Municipalities since most of the trained staff continued working in the agencies, applying the acquired knowledge, despite changes in management.

With respect to the studies financed with NBEP resources, for the most part they were useful as the basis for the development of policies and programs to support the decision-making of environmental authorities.

LOAN 7136-ME. PROGRAMMATIC ENVIRONMENTAL STRUCTURAL ADJUSTMENT LOAN.

SECRETARIAT OF THE ENVIRONMENT AND NATURAL RESOURCES (SEMARNAT).

This first stage of the program allowed us to support the efforts of the new federal administration toward the modernization of the environmental sector and the integration of environmental issues into the governmental sectors.

The adjustment loan included actions that were integrated into current Federal Government programs aimed at creating, expanding, or complementing the process of including environmental issues in the sectoral agendas in order to achieve greater

impact in terms of efficiency and effectiveness within a decentralized model of environmental management. A fundamental part of the Program is to commit adequate financing for environmental management, thus optimizing the use of financial resources and the synergies generated by the actions derived from intersectoral coordination.

Some of the advantages of continuing with this program and which is part of the experience gained would be: that the program acts as a catalyst for achieving goals in priority areas of the Transversality¹⁰ Agenda; greater probability that future administrations will maintain the program, particularly the Transversality Agenda; and, reduced risk of radical changes in policies.

The priority actions comprising the program reflect the need for being selective, recognizing the extent of the environmental challenges facing the country that has led us to adopt prioritized criteria, complementing those already defined in the National Program for the Environment and Natural Resources.

NATIONAL WATER COMMISSION (NWC)

The experience gained through the Environmental Adjustment Loan for the water sector was beneficial because it provided the opportunity to establish a collaborative effort among the sectors involved allowing us to focus our actions toward a common objective: sustainable development and environmental protection.

However, we consider that it would be advisable that the project leader designated by the World Bank be fluent in Spanish to avoid misunderstandings and waste of time by both parties. It would also be positive if the project leader remains in the post until the end of the project to avoid misunderstandings on the same.

We wish to reiterate that the actions contained in the matrix of commitments for the follow-on operation are indicative and will be specified or modified as appropriate once the negotiations on the following stage take place.

Conclusions

¹⁰ The term “mainstreaming” is used in Bank documents.

1. Rotations of the working teams affected the performance of the projects. In addition, it is the opinion of the executing agencies that greater familiarity with the Mexican context by World Bank project leaders would have been advantageous.
2. There is potential for improvement in the training provided to those responsible for project implementation with regard to World Bank standards applicable to these type of projects.
3. The projects had a high level of technical complexity and coordination of actions among the authorities of SHCP, BANOBRAS, and the implementation agencies. In addition, various unforeseen events hindered even more the implementation.

Lessons Learned

1. In future loans involving more than one implementing agency, especially in structural adjustment loans, it would be advisable to have clear incentives for each of the involved agencies to achieve the objectives of the project.
2. It would be advisable to strengthen the institutional memory mechanisms to diminish the effect of the rotation of officials who make up the working teams.
3. Ensure that project components to be financed are not included in other federal or state environmental programs, in order to avoid duplication of financial efforts.

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