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Report to the Chairman, Committee on
Commerce, Science and Transportation,
U.S. Senate

August 1992

U.S.-MEXICO TRADE

Assessment of Mexico's Environmental Controls for New Companies



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United States
General Accounting Office
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The Honorable Ernest E. Hollings
Chairman, Committee on Commerce, Science
and Transportation
United States Senate

Dear Mr. Chairman:

As you requested, we assessed Mexico's environmental controls on new U.S. majority-owned companies that established plants in Mexico between May 1990 and July 1991 under the Mexican "maquiladora" program.¹ The Mexican government views these environmental controls, consisting primarily of environmental impact appraisals (EIA) and operating permits, as critical to Mexico's ability to deal in an environmentally sound manner with the growth expected under a potential U.S.-Mexican free trade agreement.² This report (1) assesses whether a sample of six U.S. majority-owned maquiladora companies that established plants in Mexico between May 1990 and July 1991 prepared EIAs and obtained operating permits before beginning operations, (2) provides information on needed improvements in these environmental controls, (3) discusses Mexico's limitations on the public's participation in approving EIAs and operating permits, (4) identifies Mexico's budget for its environmental protection program and other efforts to strengthen environmental protection, and (5) provides information on the extent of U.S.-Mexican cooperation to strengthen and improve EIA compliance.

Background

In September 1990 President Bush notified Congress of his intent to negotiate a free trade agreement with Mexico. Mexico's ability to effectively handle the expected economic growth that could result from a free trade agreement without exacerbating its environmental problems is critical. Mexico already faces numerous environmental problems caused by air and water pollution and by hazardous waste contamination. Although supporters of a free trade agreement believe that it will help the Mexican economy grow and thereby provide the funds to assist in accomplishing its environmental goals, U.S. environmental and labor groups have expressed concern that such an agreement may create

¹Mexico established the maquiladora program in 1965. It allows duty-free imports of manufacturing components to Mexico for processing or assembly of products that must then be exported from Mexico unless special approval is given to sell them in the Mexican market.

²In the United States there is no federal requirement that private entities prepare environmental impact appraisals. The U.S. National Environmental Policy Act, 42 U.S.C. 4321 et seq., applies to federal actions only.

additional pollution problems for Mexico and border areas of the United States.

Mexico's first comprehensive environmental law, the General Ecology Law, became effective in 1988. The General Ecology Law addresses both environmental protection and natural resource conservation. The environmental protection provisions address air, water, and hazardous waste pollution, and pesticides and toxic substances. They also establish a framework for making appraisals of environmental impact. This law gives the Secretariat of Urban Development and Ecology (SEDUE) overall responsibility for formulation and enforcement of ecology policy.

Our work for this report included analysis of SEDUE documents and interviews with SEDUE officials. However, on May 26, 1992, it was announced that a new Mexican agency was being established, the Secretariat of Social Development (SEDESOL); that agency is to include all environmental functions previously performed by SEDUE, plus additional functions such as channeling funds into social welfare and infrastructure projects under the Solidarity Program. Although the reorganization is in process, we continue to refer to Mexico's environmental agency as SEDUE throughout this report because the specifics of the reorganization have not yet been completed.

SEDUE published the implementing regulations for the EIA requirement in June 1988. The regulations require owners and/or operators of companies to submit an EIA to SEDUE for approval before construction if their operations could have adverse ecological effects on the environment or violate federal environmental regulations and standards, according to SEDUE's Director of Norms and Regulations.³ If SEDUE considers the operations highly dangerous, a risk study must be submitted as part of the EIA. Before beginning operations, owners and/or operators of new companies must also obtain applicable SEDUE permits for air emissions, water discharges, and handling of hazardous waste, as applicable. (See app. I for further information.) According to SEDUE, by imposing these environmental controls on new companies, Mexico intends to only allow activities that are ecologically sound and to not accept investments that are harmful to the environment.

Mexico's Secretariat of Commerce and Industrial Promotion (SECOFI), as coordinating agency for the maquiladora program, is responsible for

³Owners and/or operators of any new public or private works projects or activities that could have adverse ecological effects or violate federal environmental regulations and standards are required to submit an EIA.

ensuring that new maquiladoras comply with the requirements of SEDUE and several other federal agencies before issuing a license to participate in the maquiladora program.

Results in Brief

None of the six new U.S. majority-owned maquiladoras in our sample that established plants in Mexico between May 1990 and July 1991 had prepared an EIA or had obtained a letter from SEDUE stating that an EIA was not required. In addition, SEDUE allowed four of the six companies to operate before obtaining operating permits. According to a SEDUE official, if these six companies did not prepare an EIA or obtain a letter from SEDUE, the failure to do so would constitute noncompliance with Mexico's EIA regulation. Furthermore, this SEDUE official stated that the lack of compliance with the EIA requirement is widespread and not confined solely to new U.S. majority-owned maquiladoras.

Our review indicates that improvements could be made to strengthen Mexico's environmental controls on new companies. These improvements include issuing specific guidance, improving enforcement by SEDUE and SECOFI, and developing and implementing a system to identify new companies that had not prepared EIAs or obtained a SEDUE determination that an EIA was not required. SEDUE has taken or is planning to take several actions to strengthen environmental controls on new companies. (App. II provides further information on the issues discussed in this paragraph and the one preceding.)

SEDUE is planning to expand public participation in the approval of EIAs and operating permits. According to a SEDUE official, Mexico's law does not provide for public participation until after EIAs are approved. In addition, a SEDUE official stated that there is no provision in the Mexican law or regulations for public participation in approving operating permits. SEDUE promised the World Bank that the revised EIA public participation requirements would be published by December 31, 1992. Moreover, SEDUE's Director of Pollution Control stated that he would like to see public participation included as part of the process to approve operating permits. (See app. III for a further discussion of this topic.)

SEDUE's budget and staffing have increased significantly since 1989. Its budget grew from \$4.3 million in 1989 to \$66.8 million in 1992, while staffing increased from 647 in 1989 to 1,134 by 1992. To further expand and improve Mexico's environmental protection program, SEDUE has also obtained a World Bank loan and grant designed to, among other things, set

the stage for delegating responsibility for environmental protection activities to the states and privatizing certain environmental protection activities, such as conducting inspections. (See app. IV for a further discussion of this topic.)

U.S.-Mexican cooperative efforts to date have focused on reducing air pollution in Mexico City, as well as on efforts along the U.S.-Mexican border to reduce water pollution and undertake cooperative training visits to inspect companies. In response to the EIA compliance problem, the United States and Mexico recently agreed to cooperate to develop the needed EIA guidance and provide training in reviewing EIAs. (See app. V for a further discussion of this topic.)

Scope and Methodology

We drafted a detailed description of SEDUE's environmental controls on new companies based on interviews with SEDUE's Director of Norms and Regulations and an Environmental Protection Agency (EPA) report assessing Mexico's environmental laws and regulations.⁴ This description was reviewed and approved by SEDUE's Undersecretary of Ecology. We used the description as the basis for understanding Mexico's environmental control system. Information in this report on Mexican legal matters does not reflect our independent analysis of the matters but rather is a synopsis of information from secondary sources in the Mexican and U.S. governments.

Using a maquiladora list obtained from SECOFI, we initially identified a universe of 116 U.S. majority-owned maquiladoras that had obtained SECOFI licenses to participate in the maquiladora program between May 1990 and July 1991. We selected May 1990 as the start of our period because SECOFI's data did not begin to distinguish between new maquiladoras and maquiladoras renewing their SECOFI operating licenses until May 1990. We used July 1991 as our cut-off date to allow some maquiladoras in our sample sufficient time to complete the EIA process. At our request, EPA Region IX staff classified maquiladoras on this list as potentially high, medium, or low polluters. One of our selection criteria was to choose maquiladoras that were classified as potentially high or medium polluters. In order to keep our travel time and costs to a minimum we restricted our sample to maquiladoras with a parent company in either Texas or California. Out of our universe of 116 U.S. majority-owned

⁴The EPA report is entitled Evaluation of Mexico's Environmental Laws and Regulations: Interim Report of EPA Findings (Washington, D.C.: Nov. 22, 1991).

maquiladoras, 37 met our selection criteria. We judgmentally selected 12 of these to visit.

To assess whether U.S. majority-owned maquiladoras had prepared EIAs and obtained operating permits, we used our selected sample of 12 U.S. majority-owned maquiladoras. For each maquiladora in our sample, we held discussions with senior company officials concerning compliance with the EIA requirements for new companies, and we reviewed the maquiladora's environmental records. Actual meetings took place at either the U.S. parent company or at the maquiladora. Based on our visits to the 12 maquiladoras in our sample we learned that 6 were new, and 6 involved a change of ownership of an existing company. Our analysis is based on the six new maquiladoras.⁶

To obtain information on Mexico's limitations on public participation, we reviewed the EPA report assessing Mexico's law and regulations. We also held discussions with SEDUE's Director of Pollution Control and Director of Norms and Regulations, as well as with EPA officials including a member of the legal team that prepared the EPA report.

To identify Mexico's efforts to strengthen its environmental protection program, we met with the SEDUE Undersecretary of Ecology and the Directors of Pollution Control and of Norms and Regulations. We obtained statistics on SEDUE's staff, work load, and funding. We reviewed World Bank documents on the major loan and grant designed to strengthen SEDUE's environmental program. Documentation concerning SEDUE's privatization plans was also reviewed.

To assess the need for U.S.-Mexican cooperative efforts to strengthen and improve the environmental controls on new companies, we held discussions with the SEDUE Directors of Pollution Control and of Norms and Regulations, the EPA Environmental Attache assigned to the U.S. embassy in Mexico City, and staff of EPA's Office of International Activities, including the U.S. Special Assistant for U.S.-Mexico Border Affairs. We also utilized the results of our visits to six new U.S. majority-owned maquiladoras.

We did our work between July 1991 and April 1992 in accordance with generally accepted government auditing standards.

⁶Our sample revealed that the SECOFI list of maquiladoras from which we selected our sample included both new maquiladoras and existing maquiladoras that had changed ownership.

We discussed our findings with appropriate officials from the Department of State, EPA, SEDUE, and SECOFI. They generally agreed with the facts presented, and their comments have been incorporated where appropriate.

As agreed with the Committee, unless you announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to the Secretary of State, the Administrator of EPA, and other interested parties. We will also make copies available to others upon request.

Please contact me at (202) 275-4812 if you or your staff have any questions concerning this report. The major contributors to this report are listed in appendix VI.

Sincerely yours,



Allan I. Mendelowitz, Director
International Trade and Finance Issues

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Abbreviations

EIA	Environmental Impact Appraisal
EPA	Environmental Protection Agency
SECOFI	Secretariat of Commerce and Industrial Promotion
SEDESOL	Secretariat of Social Development
SEDUE	Secretariat of Urban Development and Ecology

Mexico Places Environmental Controls on New Companies

Mexico's General Ecology Law of 1988 requires that the Secretariat of Urban Development and Ecology (SEDUE) give advance authorization for public or private actions that could cause adverse ecological effects or violate federal environmental regulations and standards.¹ Prospective owners and/or operators of such activities are required to conduct preconstruction environmental impact appraisals (EIA) or submit a form to SEDUE and obtain a determination that an EIA is not required.

EIAs entail analyzing a proposed project's potential environmental impact, providing possible mitigation measures to minimize adverse effects, and ensuring compliance with other environmental laws. Depending upon the gravity of a project's potential impact, a general, intermediate, or specific EIA may be required. In addition, new activities that are considered highly dangerous because they involve hazardous materials and/or produce hazardous waste that may have serious effects on the environment are required to submit a risk study as part of the EIA. The risk study must address security measures that will be taken to avoid, mitigate, minimize, or control the adverse effects of a possible accident during normal operations. Owners and/or operators of existing activities planning modifications that may adversely affect the environment are also required to submit an EIA. EIAs must be prepared by consultants registered with SEDUE.

The General Ecology Law gives all levels of government, from federal to local, responsibility for evaluating EIAs. SEDUE is responsible for federal public works projects; water power projects; public highways; oil, gas, and oil pipelines; chemicals, steel, paper, sugar, beverage, cement, automobile, and electrical industries; mineral and nonmineral mining and refining activities; federal tourism developments; hazardous waste facilities; and forestry enterprises. State and local authorities are responsible for reviewing all others. To date, 27 of the 31 Mexican states have promulgated laws governing their environmental review process. SEDUE is currently handling all EIA evaluations until the states are deemed capable of assuming this responsibility.

To initiate this environmental approval process, a prospective new company owner/operator must first submit an EIA or an "Informe Preventivo" form, a standard form filled out by companies whose

¹The information presented in this appendix is based on discussions with SEDUE's Director of Norms and Regulations and review of an Environmental Protection Agency (EPA) report assessing Mexico's laws and regulations. It has been reviewed and approved by SEDUE's Undersecretary of Ecology and Director of Norms and Regulations. According to the Undersecretary and Director, this system also applies to federal, state, and local government public works projects and activities.

environmental impact may be minimal and may not need an EIA. In practice, if contacted by a company that thinks it may need to submit an EIA, SEDUE tells companies to submit a "Dictamen de Viabilidad," but not to prepare an EIA until SEDUE determines that an EIA is needed. The "Dictamen de Viabilidad" is a summary describing the planned location and operations. Within 15 days of receipt, SEDUE evaluates the information to determine (1) whether the intended facility violates any local, state, or federal land use restrictions, including the system of national ecological zones,² and (2) whether the environmental impact is significant enough to warrant an EIA and risk study. Companies originally submitting a "Dictamen de Viabilidad" will be requested to submit an "Informe Preventivo" if SEDUE determines they will not significantly affect the environment. Based on this evaluation, SEDUE issues a letter that either disallows the project, approves the project without an EIA or risk study, or specifies the type of EIA and risk study required.

SEDUE regulations specify time frames for review and approval of the EIA. They range from 30 to 90 working days following receipt by SEDUE of a completed EIA. Based on its initial evaluation, SEDUE may also require that a more detailed type of EIA be submitted. Upon completion of the EIA and risk study review, SEDUE issues a written resolution that approves or denies the project, establishes conditions that must be met, and authorizes construction to begin. The General Ecology Law empowers SEDUE to deny authorization for a project and to impose conditions on its design, construction, operation, and location, even in cases for which standards have not yet been developed.

SEDUE's resolution/construction authorization is valid for 1 year, during which time the company must meet the specified conditions and obtain the required SEDUE operating permits. If these conditions are not completed within 1 year, the company must request renewal of its construction authorization. The operating permits required may include an air emissions operating license, a wastewater discharge registration, and various hazardous waste generation and handling authorizations, depending on each company's production processes. All maquiladora companies are required to obtain air emissions operating licenses. SEDUE is currently reviewing and approving or disapproving all operating permits until the states are deemed capable of assuming responsibility for issuing permits.

²Mexico has established an ecological zoning program to ensure that the development of national infrastructure projects complies with environmental law and protects natural resources.

**Appendix I
Mexico Places Environmental Controls on
New Companies**

For new maquiladora companies, the Secretariat of Commerce and Industrial Promotion (SECOFI) is responsible for ensuring that they notify SEDUE and initiate the EIA process before giving them permission to operate a maquiladora in Mexico. In order to obtain a SECOFI license, a copy of the EIA, "Dictamen de Viabilidad," or "Informe Preventivo" showing a stamp that it had been received by SEDUE must be submitted as part of the application. In this way, SECOFI ensures that the SEDUE process has been initiated before issuing a SECOFI license. SECOFI also serves as a coordinating agency for several other agencies, including Mexico's labor, tax, and health agencies.

Sampled Companies Did Not Prepare Environmental Impact Appraisals or Obtain Negative Determinations; Improvements Could Be Made to Strengthen EIA Process

Of the six new companies in our sample, none prepared EIAs or obtained a determination from SEDUE that an EIA was not required before beginning operations in Mexico. Several improvements could be made to strengthen the EIA process.

Some Companies Did Not Prepare EIAs or Obtain Negative Determinations

None of the six new U.S. majority-owned maquiladoras in our sample submitted an EIA or had obtained a letter from SEDUE stating that an EIA was not required. SEDUE's Director of Norms and Regulations stated if these maquiladoras did not submit an EIA, or had not submitted a "Informe Preventivo" and obtained a SEDUE determination that an EIA was not required, this lapse would constitute noncompliance with Mexico's EIA regulation. He further said that there is widespread noncompliance with the EIA requirements among many sectors of Mexico's economy, both public and private, and is not limited to U.S. majority-owned maquiladoras.

Improvements Needed to Strengthen EIA Process

Our review indicates that several improvements could be made to strengthen the EIA process. Specific guidance regarding which companies must prepare EIAs and risk studies needs to be developed, SEDUE and SECOFI need to improve enforcement of this requirement, and a system is needed to identify new companies that had not prepared EIAs or obtained a SEDUE determination that an EIA was not required. The Director of Norms and Regulations agreed with our assessment and has taken or is planning actions to strengthen environmental controls on new companies.

Lack of Specific Guidance

According to the Director of Norms and Regulations, Mexico's EIA regulation requires companies that could have adverse ecological effects or violate federal environmental regulations and standards to submit an EIA. Furthermore, if the person in charge of the project deems that it will not cause adverse ecological effects or violate environmental regulations, an "Informe Preventivo" describing the effects of the project should be submitted to SEDUE for approval. However, according to the Director of Norms and Regulations, the law, regulations, and guidance do not define adverse ecological effects that require submission of an EIA. If SEDUE is contacted by a company that thinks that it needs to submit an EIA, it is told to submit a "Dictamen de Viabilidad" describing the project and not to prepare an EIA until SEDUE makes an individual determination concerning the need to prepare an EIA. SEDUE will then analyze the project and send the company a letter with an individual determination regarding the need to submit an EIA.

**Appendix II
Sampled Companies Did Not Prepare
Environmental Impact Appraisals or Obtain
Negative Determinations; Improvements
Could Be Made to Strengthen EIA Process**

The lack of specific guidance for use by companies to determine if an EIA should be prepared may have contributed to five of the six U.S. majority-owned maquiladora companies in our sample indicating that they had not prepared an EIA or an "Informe Preventivo." Officials from five companies in our sample told us that they did not think that their company had to prepare an EIA and/or they did not know that they were to submit an "Informe Preventivo" to obtain a determination from SEDUE that an EIA was not required. The sixth company had submitted an "Informe Preventivo" to SEDUE to obtain an individual EIA determination, but a company official could not recall whether a response letter from SEDUE had been received.

Inadequate Enforcement

As coordinating agency for the maquiladora program, SECOFI is responsible for ensuring that new maquiladora companies contact SEDUE before SECOFI issues them licenses to participate in the maquiladora program, according to SEDUE's Director of Norms and Regulations. SECOFI is responsible for briefly reviewing an EIA, "Dictamen de Viabilidad," or an "Informe Preventivo" that has been stamped as received by SEDUE, or a SEDUE letter to the company regarding the need to submit an EIA. However, SECOFI issued licenses to five of the six companies in our sample without receiving and reviewing the appropriate SEDUE documentation. SECOFI had received an "Informe Preventivo" that had been stamped as received by SEDUE before issuing a SECOFI license to the sixth company. SECOFI's Director of the Maquiladora Program acknowledged that licenses should not have been issued to the five new maquiladoras and that SECOFI staff may be unclear on exactly what SEDUE documentation they must review before issuing a SECOFI license.

Before beginning construction, new companies must have an approved EIA or a SEDUE determination that an EIA is not required, according to the Director of Norms and Regulations. Also, before beginning operations companies must obtain applicable SEDUE operating permits, including air emissions operating licenses.¹ However, we found that SEDUE was allowing four of the six new maquiladoras to operate provisionally pending review and approval of their air emissions operating license applications. The other two maquiladoras in our sample had not submitted air emissions operating license applications. In addition, because SEDUE officials were not verifying that new companies had submitted EIAs or had obtained a

¹The operating permits required by Mexico's law and regulations vary by company and may include an air emissions operating license and water and hazardous waste permits and/or authorizations, according to SEDUE's Director of Pollution Control. Since all new maquiladoras are required to obtain air emissions operating licenses, we also determined whether these applications had been submitted by the six new maquiladoras and approved by SEDUE.

**Appendix II
Sampled Companies Did Not Prepare
Environmental Impact Appraisals or Obtain
Negative Determinations; Improvements
Could Be Made to Strengthen EIA Process**

SEDUE determination that an EIA was not needed before accepting these license applications, SEDUE was allowing the four maquiladoras to operate without submitting an EIA or receiving a determination.

SEDUE's Director of Pollution Control stated that provisional approval was given to operate due to a shortage of funds and staff. The Director noted that air emissions operating license applications from new companies are briefly reviewed, and provisional approval is given to operate pending more thorough review of the applications and issuance of the licenses. SEDUE's Director of Norms and Regulations stated that the air emissions operating license applications were accepted because SEDUE staff responsible for receiving them had not been told to verify (1) that the company had an approved EIA or (2) that SEDUE had determined that an EIA was not required before accepting the applications.

**Lack of System to Identify
New Companies**

SEDUE does not have a mechanism to help ensure that all new companies are identified and have prepared EIAs or obtained a SEDUE determination that an EIA is not required. Currently SECOFI is responsible for providing this assurance for new maquiladora companies, but not for companies that do not participate in the maquiladora program.

**SEDUE Efforts to
Strengthen Environmental
Controls**

According to the Director of Norms and Regulations, SEDUE is developing specific guidance that will provide criteria for determining whether adverse ecological effects may occur and whether activities are highly dangerous. He stated that the new guidance is intended to improve company compliance with and enforcement of the EIA requirements by SEDUE and SECOFI officials. The guidance will also (1) provide lists of industries that are not required to submit EIAs and risk studies, (2) indicate which types of EIAs and risk studies are required, and (3) explain the entire process of obtaining advance SEDUE approval for constructing and operating new companies and projects in Mexico.

The new draft EIA guidance was scheduled to be completed by late June 1992, according to SEDUE's Director of Norms and Regulations, and is expected to be published in September 1992 at the earliest. SEDUE will then develop industry-specific instructions on the preparation of EIAs for 17 industries including cement, steel, paper, sugar, automotive, chemical, petrochemical, and tourism.

**Appendix II
Sampled Companies Did Not Prepare
Environmental Impact Appraisals or Obtain
Negative Determinations; Improvements
Could Be Made to Strengthen EIA Process**

According to SEDUE's Director of Pollution Control, since January 1992 SEDUE is no longer giving provisional air emissions operating licenses to new companies in the six border states where most maquiladoras are located. However, he also stated that because funds and staff are limited, new companies in the other Mexican states will continue to be allowed to operate under provisional air emissions operating licenses.

SEDUE plans to identify maquiladoras that have not complied with the EIA requirements and require corrective action beginning in July 1992 once the EIA guidance is completed, according to SEDUE's Director of Norms and Regulations. He also stated that SEDUE is currently working with federal agency projects that are not in compliance with the EIA requirement because SEDUE believes its first priority is to ensure compliance within the Mexican federal government.

Public Participation Is Limited

Currently Mexican law and regulations allow public review of EIAs only after they have been approved and do not provide for public review of operating permits, according to SEDUE's Directors of Norms and Regulations and of Pollution Control. According to EPA officials, in the United States public participation is a major element of the process for approving environmental impact statements, as well as air, water, and hazardous waste permits. These officials stated that such participation allows input from expert government agencies and the general public to help assure that all factors have been considered to adequately protect the environment before new projects are approved.

Approved EIAs are listed in SEDUE's Ecological Gazette, and one copy is made available for public review at the Center for Public Information in Mexico City. In the United States, however, drafts of environmental impact statements for federal actions, and permits for both public and private actions, must be publicized and made available for public review for a specified period at the national level, the state level, and/or in the local area of the project depending on whether the environmental effects are of national or local concern, according to EPA. In certain cases a public hearing must be held. There is no federal requirement in the United States, however, that private entities or state and local governments prepare environmental impact appraisals.

SEDUE's Director of Norms and Regulations told us that since January 1991, although SEDUE is not required by law or regulation to do so, it has made EIAs available for public review once they are deemed complete and before they have received SEDUE approval. However, he also stated that (1) a specific period should be reserved for public review or there may not be much time available for review between publication of the notice in the Ecological Gazette and final approval of the EIA by SEDUE and (2) public access is still very limited because notice is published only in the Ecological Gazette and a draft is made available only in Mexico City.

According to SEDUE's Director of Norms and Regulations, SEDUE is developing a new system, with the assistance of World Bank funding, for ensuring earlier and improved public access and for responding to comments or complaints regarding EIAs. SEDUE promised the World Bank that the revised EIA public participation requirements would be published by December 31, 1992. SEDUE's Director of Pollution Control stated that he would like to see public participation included as part of the process to approve operating permits.

SEDUE Has Increased Staff and Funds for Implementation and Enforcement of Environmental Protection Program

SEDUE officials believe that additional staff and funds are needed to effectively carry out and enforce Mexico's environmental protection program and ensure that all facilities are in compliance with the EIA and operating permit requirements. SEDUE is expanding its staff and funding, planning to delegate responsibility to the states, and studying privatizing some activities to be performed on a fee basis.

SEDUE's branches for Norms and Regulations and for Pollution Control have primary responsibility for carrying out SEDUE's environmental protection activities including reviewing EIAs, issuing operating permits, performing inspections, and taking enforcement action. SEDUE's Community Participation Branch is responsible for environmental education and community participation in environmental protection.

Table IV.1 shows the increases in SEDUE's environmental protection staffing from 1989 to 1992.

Table IV.1: SEDUE Environmental Protection Staff, 1989-1992

	1989	1990	1991	1992
Norms & Regulations Branch	73	100	233	280
EIAs and risk studies	24	39	119	135
Norms and regulations	18	28	48	48
Ecological ordering	16	19	48	72
Management and finance	15	14	18	25
Pollution Control Branch	354	381	481	600
Operating permits and pollution monitoring	170	196	227	252
Air	106	130	129	159
Water	35	37	63	58
Hazardous/solid waste	29	29	35	35
Inspection and enforcement	81	85	140	250
Management and finance	103	100	114	98
Community Participation	220	227	250	254
Grand Totals	647	708	964	1,134

Source: SEDUE.

SEDUE staff increased from 647 in 1989 to 1,134 in 1992. As part of this increase, SEDUE significantly increased the size of its EIA and risk study staff. In 1989, SEDUE had a total of 24 staff responsible for evaluating EIAs and risk studies for compliance. By 1992, SEDUE had 135 staff, according to

**Appendix IV
 SEDUE Has Increased Staff and Funds for
 Implementation and Enforcement of
 Environmental Protection Program**

SEDUE statistics. These statistics also showed that SEDUE staff responsible for, among other things, approving operating permits for air emissions, water discharges, and hazardous and solid waste have increased from 170 in 1989 to 252 in 1992, an increase of approximately 50 percent.

As staffing levels have increased, SEDUE's work load has also grown. The number of EIAs reviewed more than quadrupled from 180 in 1989 to 829 in 1991, and the number of air emissions operating licenses issued increased from 298 in 1989 to 554 in 1991. Moreover, the number of water permits issued more than doubled from 638 in 1989 to over 1,300 in 1991. Table IV.2 shows the growth of SEDUE's work load between 1989 and 1991.

Table IV.2: SEDUE Environmental Protection Work Load, 1989-1991

	1989	1990	1991
Norms & Regulations Branch			
Environmental impact appraisals reviewed	180	528	829
Risk studies reviewed	86	102	89
Technical norms issued	7	3	20
Pollution Control Branch			
Air operating licenses issued	298	215	554
Water permits issued	638	952	1,321
Inspections	1,380	2,056	3,119
Facility closures	160	357	1,228
Complete permanent	0	0	2
Complete temporary	1	2	325
Partial temporary	159	355	901
Compliance agreements	225	500	1,323

Source: SEDUE.

SEDUE has expanded its environmental protection expenditures significantly since 1989. However, Mexico's ability to continue the increased level of environmental expenditure by SEDUE is predicated on continued economic development and a major World Bank loan, according to the U.S. embassy science officer. Table IV.3 shows that SEDUE's environmental protection funding has increased from approximately \$4.3 million in 1989 to approximately \$66.8 million in 1992, including World Bank project funds.

**Appendix IV
 SEDUE Has Increased Staff and Funds for
 Implementation and Enforcement of
 Environmental Protection Program**

**Table IV.3: SEDUE Environmental
 Protection Funding, 1989-1992**

U.S. dollars in thousands				
	1989	1990	1991	1992
Norms & Regulations Branch	\$256.6	\$220.2	\$930.5	\$4,564.5
EIAs and risk studies	135.9	101.9	503.3	1,866.2
Norms and regulations	49.1	43.1	81.5	103.1
Ecological ordering	71.7	75.3	345.7	2,595.2
Pollution Control Branch	2,933.6	6,996.5	8,467.2	20,482.1
Operating permits/ pollution monitoring				
Air	791.7	3,948.6	2,799.7	4,282.7
Water	683.8	885.5	1,648.3	3,953.8
Hazardous/solid waste	631.7	1,195.3	2,301.3	8,275.9
Inspection/enforcement	220.4	259.4	730.8	2,090.8
Laboratories	606.0	707.7	987.1	1,878.8
Community Participation	1,090.6	1,354.6	1,685.1	1,777.1
Border Plan Activities^a	•	•	•	30,565.4
Other^b	•	•	2,840.4	9,428.1
Grand totals	\$4,280.8	\$8,571.2	\$13,923.2	\$66,817.1

Notes: Natural resource conservation expenditures/budget data are not included. Figures for 1989 through 1991 are actual expenditures. Budget data are shown for 1992. The 1991 and 1992 figures include World Bank loan and Global Environmental Trust grant funds. Categories on this table do not parallel those of table IV.1 because Mexico supplied data using different categories. Totals do not add due to rounding.

^aFunds for certain environmental activities Mexico has committed to funding along the U.S.-Mexico border beginning in 1992.

^bOther includes expenditures for decentralization activities, a computer network, and a consultant to prepare a plan for reorganizing and strengthening SEDUE. Expenditures for the decentralization activities began in 1991.

Source: SEDUE.

In April 1992, the World Bank approved a \$50-million loan and a \$30-million grant over 4 years.¹ As a condition for receiving these funds, Mexico has committed \$46.6 million in matching funds for a total project cost of \$126.6 million. The World Bank project is designed to strengthen SEDUE's environmental protection program and set the stage for a more decentralized approach to providing environmental protection in Mexico.

¹The \$30-million grant was provided for biodiversity conservation by the Global Environment Facility. This facility is a pilot program for helping developing countries to contribute towards solving global environmental problems. The World Bank, the United Nations Development Programme, and the United Nations Environment Programme are jointly responsible for its implementation.

**Appendix IV
SEDUE Has Increased Staff and Funds for
Implementation and Enforcement of
Environmental Protection Program**

This project will also finance activities to support preparation of a proposal for a second World Bank project that would focus on state-level environmental agencies.

The World Bank project provides \$6.6 million to reinforce SEDUE's abilities to review EIAs and risk studies, and monitor compliance with conditions imposed on approved projects. These funds are to be used to (1) increase the number and technical capabilities of staff responsible for reviewing EIAs, (2) delegate to SEDUE staff in the states the authority for evaluating and approving EIAs, (3) increase the capacity of state environmental authorities to review environmental appraisals in areas within their jurisdiction, and (4) increase public access and input into the process for reviewing EIAs.

Using World Bank project funds, SEDUE hired the international consulting firm of Booz, Allen and Hamilton to prepare a plan for reorganizing and strengthening SEDUE. The consultant's work was used as input for the establishment in May 1992 of the Secretariat of Social Development (SEDESOL), the new environmental agency. This plan will also identify the steps necessary to privatize many environmental protection activities, including inspections, laboratory analysis, and EIA reviews, according to SEDUE's Directors of Pollution Control and of Norms and Regulations. These functions would be performed on a fee basis by private companies with oversight by SEDUE and/or the states. The plan was scheduled to be completed by June 30, 1992.

The World Bank project is also funding a pilot program to delegate authority to five Mexican states to carry out various environmental functions, such as reviewing EIAs, conducting inspections, taking enforcement action, and issuing operating permits, according to SEDUE's Directors of Norms and Regulations and of Pollution Control. SEDUE eventually plans to delegate responsibility for the environmental program to all 31 states.

The United States and Mexico Have Agreed to Cooperate on Addressing EIA Compliance

The United States and Mexico have initiated several cooperative efforts related to improving the environment in Mexico and along the U.S.-Mexican border. These efforts have concentrated on areas such as Mexico City air pollution, border water pollution, and other border activities (e.g., cooperative training visits to inspect companies, development of a shared data base, etc.). They have not included efforts to ensure that EIAs are prepared by new companies.

The results of our sample suggest that there is a need for cooperative efforts to improve Mexico's EIA program. According to the Director of Norms and Regulations, the present system for ensuring that new activities that significantly affect the environment are approved in advance is not working, and key guidance and criteria are still under development. He stated that assistance from EPA would be helpful in providing training on how to review an EIA for compliance with the requirements. This training is especially important because SEDUE plans to decentralize EIA review responsibility to state and local offices. Currently EIAs are reviewed and approved only by SEDUE headquarters staff.

Staff from the EPA's Office of International Activities agreed that U.S. assistance to help SEDUE improve implementation of its EIA program would be useful. EPA has been responsible for reviewing EIAs prepared by other federal agencies under the National Environmental Policy Act since 1970, and it has a wealth of experience and expertise that would be useful to SEDUE in developing this guidance and criteria. In May 1992 the EPA's Environmental Attache assigned to the U.S. embassy in Mexico City, and SEDUE's Director of Norms and Regulations, agreed to cooperate on developing EIA guidance and providing EIA review training. The U.S. Agency for International Development has agreed to provide up to \$50,000 to fund the EIA training effort. In addition, according to a member of the Cooperative Enforcement Strategy Workgroup created under the 1983 U.S.-Mexico Border Agreement, EPA plans to initiate discussions within the workgroup concerning providing assistance to improve implementation of the EIA program.

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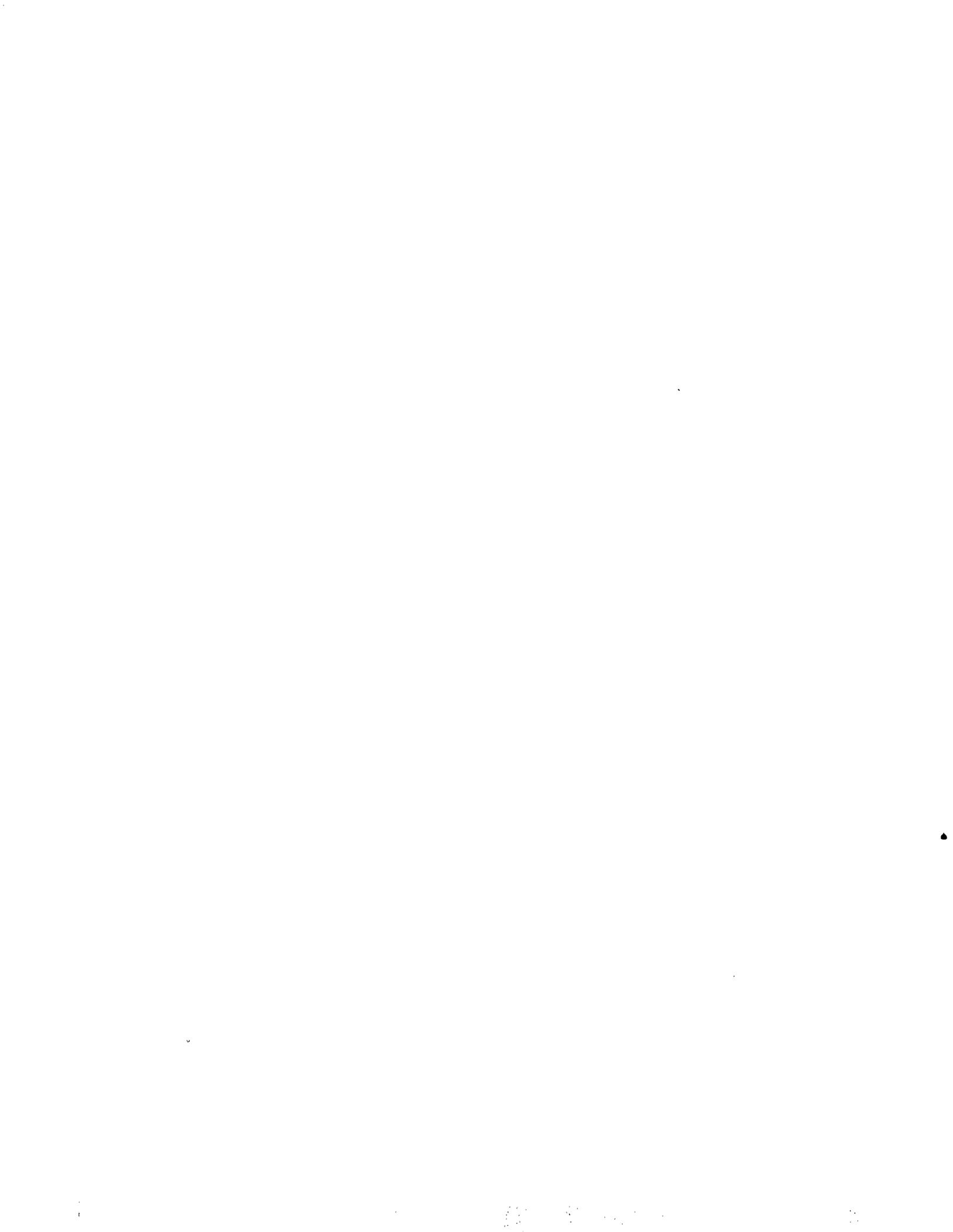
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