



1. Project Data :
OEDID: L3480
Project ID: P006495
Project Name: National Industrial Pollution Control Project
Country: Brazil
Sector: Pollution Control / Waste Management
L/C Number: L3480-BR
Partners involved : Export Import Bank of Japan, Japan Grant
Prepared by: Ronald Parker, OEDST
Reviewed by: Hernan Levy
Group Manager: Roger Slade
Date Posted: 04/23/1998

2. Project Objectives, Financing, Costs and Components :
 The National Industrial Pollution Control Project (for US\$50 million, approved June 1992 and closed June 30, 1997, co-financed by Japan) supported the efforts of several industrialized states in Brazil to reduce the scale of industrial pollution and increase their environmental management capacity. The objectives of the project were to:

- Improve public health and living conditions for the urban poor in and around industrialized areas;
- Familiarize the banking system with free-standing pollution control investments;
- Enhance the capability of the Banco Nacional de Desenvolvimento Economico e Social (BNDES) to understand pollution control problems and process loans in this area; and
- Assist in strengthening the monitoring and analytical capacities of some State Environmental Protection Agencies (SEPAs).

The project, which built on the experience of two previous Bank loans, had three main components:

1. A credit line for pollution control investments in existing industrial facilities;
2. Technical assistance for BNDES, to develop staff skills in environmental assessment, environmental project analysis, and pollution control regulations; and
3. Technical assistance for various SEPAs.

3. Achievement of Relevant Objectives :
 The achievement of health and environmental quality improvements is difficult to establish with precision because project interventions were dispersed nation-wide, and other pollution sources not dealt with by the project continued to impact project-served areas. A large number of subloans flowed through financial intermediaries (FIs) to help them become familiar with environmental lending (about 27.9 % of the loan flowed through FIs)--this broadened the project area and compromised the ability of the project to target specific areas and demonstrate measurable environmental improvements. Even though the technical assistance component for BNDES was delayed until 1997, institutional strengthening was achieved: environmental awareness and project review skills have increased, and environmental protection projects are one of BNDES's four main institutional priorities. Disbursements by BNDES in environment-related projects grew from \$201 million in 1990 to \$567 million in 1996.

4. Significant Achievements :
 Over 400 pollution control subprojects in seven states were implemented in industries ranging from steel to petrochemicals, fertilizers, pulp and paper, as well as central waste treatment facilities--the main urban polluters. It can be assumed that the facilities where the loan proceeds were invested are emitting less pollutants. Technically complex systems were developed to reduce particulate emissions from steel smelting. Data collected during supervision missions indicate that when the entire steel industry environmental programs are completed, there will be a noticeable improvement in air quality. One of the main pollutants of concern is particulate matter; one subcomponent's environmental program is expected cut these emissions by 99% (the subprojects financed by the Bank would contribute to approximately 30% of the total reduction). Also improved were effluent water treatment, recycling and the capacity for solid waste management.

5. Significant Shortcomings :
 The data collection networks managed by the SEPAs were not capable of measuring regional environmental

improvements (SEPAs generally were unable to persuade polluting industries to collect discharge data), and ambient air and water quality data collection was compromised by late arrival of equipment as well as lack of institutional commitment. Despite the fact that most of the funds intended to increase the capacity and motivation of the SEPAs were disbursed, sectoral conditions remained much as before. This was to be expected, amounts offered were too small relative to the SEPAs' problems to motivate managers, and much of the SEPAs' TA funds went for computers and vehicles. Due (primarily) to the complexity of the steel industry subprojects and the requirements for prior review by the Bank, there were significant disbursement delays at the beginning of the project. Environmental project generally, and pollution control projects specifically are still new to the Bank, and they have weaknesses due to their innovative nature. In this project, objectives were poorly written, in the sense that success became difficult to prove. Evaluated by the project-caused improvements in urban environmental conditions and public health, any loan that is not targeted would have small benefits considering the size and complexity of the urban areas' pollution problems.

6. Ratings :	ICR	OED Review	Reason for Disagreement /Comments
Outcome :	Satisfactory	Marginally Satisfactory	Institutional weaknesses (and the diffusion of project efforts) resulted in the inadequate measurement of environmental benefits. The extent to which the urban poor enjoyed health benefits due to pollution abatement is also unknown. The SEPAs did not increase institutional capacity, in part because their component was allocated too few resources.
Institutional Dev. :	Partial	Modest	The OED and ICR ratings are largely equivalent. The ICR rates ID for BNDEs as substantial but negligible for SEPAs. OED concurs.
Sustainability :	Likely	Likely	
Bank Performance :	Satisfactory	Satisfactory	BP was barely satisfactory. Project design failed to take into account the lessons from earlier projects. Although supervision improved as the project went on, quality at entry was poor.
Borrower Perf. :	Satisfactory	Satisfactory	
Quality of ICR :		Satisfactory	

7. Lessons of Broad Applicability :

- Supporting environmental programs in large industrial facilities recognized as major polluters can result in substantial reductions in pollutant emissions and improvements in environmental quality indicators.
- In interventions designed to improve environmental quality, quantitatively demonstrable success depends on focused targeting (either limited to a given geographical area, a group of polluting industries, a given industrial sector, etc.). Broad and open national-level credit lines will probably dilute environmental quality improvements beyond the point where they can be measured.
- The availability of credit for environmental purposes motivates regulators to increase enforcement, raising the potential demand for environmental credit.
- Although large facilities with decades of environmental neglect are commonly major polluters, the large and technically complex subprojects for pollution control are difficult to implement which can lead to disbursement delays. It is important to appraise this type of subprojects prior to loan approval.

8. Audit Recommended? Yes No

Why? OED should do a cluster audit of this project together with a number of other environmental projects to study why quality at entry continues to be problematic for environmental loans .

9. Comments on Quality of ICR :

The ICR provides a detailed and credible account of implementation experience . It notes quite persuasively that

environmental loans in Brazil need more precise targeting than they have received up to now, and that they should avoid subprojects which diffuse impact.