Environmental Capacity Building:
A Review of the World Bank’s Portfolio

Sergio Margulis
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Abstract

Weak institutional capacity is one of the major bottlenecks to the implementation of government policies and programs in the environmental field. The World Bank and other bilateral and multilateral agencies have accordingly been heavily involved in institutional strengthening and in providing technical assistance for environmental institutional development (ID). The purpose of this study is to help improve the design and effectiveness of Bank-financed environmental ID projects by taking stock of and drawing lessons from experience with the environmental ID portfolio to date. Although it is too early to judge conclusively the impact of ID projects, there is a perception that, despite the “satisfactory” rating given to most of them, the results in terms of improved environmental management capacity have been a cause for frustration. Key factors contributing to this perception are the frequent vagueness of ID objectives; the incompatibility between standard Bank approaches and projects for capacity building, which is a slow and gradual processes involving cultural change; and the incentives for task managers to focus more on quick disbursements than on results on the ground. Like the institutions that it tries to support, however, the Bank needs time to change. The new adaptable lending system and the increased emphasis on participation, decentralization, flexibility, and longer-term perspectives are likely to help improve the Bank's ID portfolio. To ensure that activities are sharply focused, stand-alone ID projects should perhaps be complemented by ID components of larger investment projects.
Executive Summary

Resources committed by governments to environmental problems have increased considerably over the past 10 years. Preliminary assessments of the effects of such expenditures suggest that they often may not have been used in the most (cost-) effective manner, in that they did not produce significant environmental improvements or did not address the real environmental priorities. Among the key factors contributing to this problem are weaknesses of institutions and organizations, meaning the lack of capacity of government environmental agencies to comply with their legal mandates. Institutional weaknesses have also been a major bottleneck to the implementation of environmental policies and programs.

The World Bank and other bilateral and multilateral agencies have realized the urgency of addressing these problems and have been heavily involved in institutional strengthening and in providing technical assistance for environmental institutional development (ID). The Bank's active environmental ID portfolio, which has institutional strengthening as a primary objective, consists of 28 projects, involving nearly $1.5 billion, to which the Bank is contributing $800 million.¹

This is a relatively young portfolio, and it is too early to say anything very conclusive about the impact of projects on the ground. There is, however, a perception of frustration when the results of such efforts in terms of improved environmental management and improved environmental conditions are compared with the resources allocated to projects. Yet the vast majority of such projects are considered satisfactory by the Bank's Annual Review of Portfolio Performance system. A prime reason for the sense of frustration is that the Bank's recognition of the vital importance of institutional strengthening may not have been accompanied by a parallel understanding of the process through which institutional change takes place.

Changing and influencing institutions fundamentally involves changing institutional cultures, the knowledge base, and informal modes of interaction, rather than just "simple" organizational structures, legal and regulatory frameworks, or office hardware. Such efforts are inevitably slow and gradual, and they are likely to encounter resistance from established interests. It is possible that the Bank has allocated large amounts of money in contexts where the real need is for cultural change. In fact, too much money may be counterproductive to ID objectives; large inflows of resources distort the normal modus operandi of institutions, so that projects are implemented under conditions that are not sustainable.

The challenges in strengthening institutions in the environmental field are further complicated by the cross-sectoral nature of environmental problems; the lack of knowledge about and understanding of the issues, which are typically new for the countries; and the fact that the institutions being strengthened or charged with implementing the projects are typically very...
Bank-financed ID projects face three key internal problems that affect them negatively:

- Current incentives for task managers promote large projects even though this is not what is required for ID projects, and they induce task managers to focus on the approval of projects rather than on the transfer of skills and improved management capacity. The incentives work to minimize problems in the country that may negatively affect projects, especially ID projects, such as the overall macroeconomic and political context, the level of real commitment to and ownership of a project, and the actual capacity of agencies to implement it.

- The current World Bank project cycle has been relatively adequate for infrastructure development in stable economies with well-established institutions and predictable government policies. However, one-time investments with limited Bank involvement in supervision are not well suited to provide the support and flexibility needed for a continuous, gradual capacity-building effort.

- The widespread use of “blueprint” solutions may be particularly inappropriate for ID because of the specific characteristics of individual countries and institutions. On the government side, the key elements for successful implementation of ID projects are ownership and political support. External assistance can help weaker institutions define and perform their legal assignments, but governments and beneficiary agencies must have the political motivation and ultimately lead the process “from the inside.” Governments must also be clear about what precisely they expect when requesting assistance for ID—something that requires the preparation of strategies for the environment, as well as broader ID strategies for the public sector. In most cases, such strategies do not exist ex ante and are prepared as part of ID projects. In a few cases, too, the political visibility of a Bank-financed environmental project can matter more than its actual outcomes.

All this—the Bank’s relatively poor knowledge of institutional cultures, the existing perverse incentives given to its task managers regarding ID objectives, the poor internal dissemination of lessons, and the rather inflexible project cycle—means that the Bank may not have a great comparative advantage in providing technical assistance in environmental ID. This can certainly be changed, and some of these problems could be overcome at the cost of relatively little time and effort. Much depends on management’s understanding of such problems and on its willingness and capacity to act. The process may have already started: there is undeniably an ongoing learning process in the Bank, with lessons being incorporated into both the implementation of older projects and the design of new ones.

The key recommendations of the study are the following:

- Projects must contain a clear statement of what is to be strengthened, clarifying the roles and responsibilities of institutions. In countries that lack the necessary policies and strategies and have weak institutional capacity, the temptation to “do everything” must be resisted by identifying priorities and phasing in actions accordingly.

- Government agencies involved with environmental ID projects must have ownership of the projects and be fully committed to them. Beneficiaries, interested parties, and the general public must be drawn in, to ensure or introduce public pressure on institutions and accountability by institutions. The Bank must leave substantive tasks to be performed by beneficiary agencies, engaging them in the process and sending the signal that technical assistance does not have a zero opportunity cost.

- Technical assistance is successful only if skills and technical expertise are actually absorbed by beneficiary institutions.
While lessons from other countries and contexts are always useful, in the case of ID projects in particular, the Bank must tailor its efforts to specific country needs and conditions. It must improve its knowledge about institutions, making greater use of resident missions and local experts. To ensure sustainability, the longer-term impact of projects should be taken into account in the performance evaluation of staff and of projects.

- New operating procedures and new lending instruments have to be introduced for dealing with the process nature of ID. Projects should support longer-term programs and pilot initiatives. They should be designed as a series of "building blocks," with the specific objectives being defined as the project develops, as institutional capacity is gradually accumulated, and as the Bank increases its knowledge about institutions. The Bank's new adaptable lending system, which aims at providing phased and sustained support for the implementation of long-term development programs, may be a promising move toward such flexible systems and should definitely be tried in ID projects.

- The Bank needs to better understand the history and politics that guide institutional decisions, to build a strong consensus with local governments and institutions about the importance of the proposed efforts, to ensure the capacity for absorbing the proposed assistance, and to secure commitment by governments. Such initiatives are an essential and unavoidable price to pay for ensuring ownership and for structuring the long-term commitment that the process of institutional strengthening requires. Within institutions, a process of discussion, education, and information is required at the initial stages of ID programs.

- Task managers must have incentives to pursue a long-term process with environmental institutions, with small and slow disbursements, and without many obvious and visible changes. They should also have the incentives and the time to design small projects, and they should be objective enough to assess realistically the government's capacity and effective interest in a project. This involves understanding and willingness to change by the Bank's management—not, fundamentally, by task managers themselves.

- The overall objective of ID projects is to strengthen the environmental management system as a whole, not just an environmental agency in isolation. It is thus important to create partnerships and cooperation in the ID process between the beneficiary agency and other entities involved with environmental issues, such as universities, industries, nongovernmental organizations (NGOs), and other government agencies. This often means nothing more than exchanging information and making the process as transparent as possible.

- Stand-alone ID projects may be necessary to help prepare or strengthen the overall policy framework governing environmental issues in developing countries, but the specific objectives to be achieved and the actions to be financed may be clearer for investment projects. Therefore, ID will probably best be achieved by a combination of the two types of project. (Investment projects are not reviewed here, but they are also not problem-free.)

- The current positive, universal trend in environmental ID projects toward decentralization, partnerships, and more direct involvement by local stakeholders must be continued. Projects must foster public participation and pressure to increase project ownership and to make institutions accountable for their work. More dialogue and negotiation with industries, polluters, and users of natural resources is necessary, as is the use of more transparent procedures in government decisionmaking in environmental matters.
Since most of the ideal ex ante conditions will not be met at the beginning, environmental ID projects have to be simple and flexible. The temptation to include too many things has to be resisted by prioritizing and by keeping expectations moderate.

Endnotes

1. Figures are through fiscal 1997. Dollar amounts are U.S. dollars.

2. As noted in the paper, the term "blueprint" is not completely appropriate because there are no clear guidelines for ID projects, nor is there an intense dissemination of experience. Nevertheless, task managers often come up with "standardized" approaches in the design of environmental ID projects.
1 Introduction

Resources committed by the governments of developing countries to environmental problems have grown considerably over the past 10 years. Preliminary assessments of the effects of such expenditures suggest that resources often may not have been used in the most (cost-) effective manner, in that they did not produce significant environmental improvements or did not address the real environmental priorities in these countries.

Among the key factors contributing to such ineffectiveness are weaknesses of institutions or organizations, meaning the lack of capacity of government environmental agencies to comply with their legal mandates. Underlying these weaknesses are factors such as lack of political support, unclear institutional responsibilities, mismatch between responsibilities and budgets, shortages of qualified personnel, and information gaps. Institutional weaknesses have also been major bottlenecks in the implementation of environmental policies and programs.

The World Bank and other bilateral and multilateral agencies have realized how critical it is to address these problems and have been heavily involved in institutional strengthening and in providing technical assistance for environmental institutional development (ID). The Bank’s active environmental ID portfolio, which has institutional strengthening as a primary objective, consists of 28 projects, involving nearly $1.5 billion, to which the Bank is contributing $800 million. (See Annex A.) Strengthening of environmental institutions is fundamental to achieving sustainable improvements in environmental conditions and in the management of environmental resources, but understanding institutions in order to influence or to modify them is a complex task. It requires a good knowledge of the “institutions,” in the sense used here—of the underlying culture, rules, and incentive structures influencing choices and outcomes, as well as the informal modes of interaction among actors. These cannot be changed merely by altering organizational structures, office hardware, or skill levels, which tend to receive the preponderance of attention in projects. While the latter are clearly very important in increasing institutional and organizational capacity, lasting changes can be undermined if the incentives to use new technology efficiently, to communicate and share knowledge, or to change the allocation of resources are not in place. The question then arises: How successful can capacity-building projects be in the long run if they do not extensively analyze and focus on the incentives underlying institutional setups?

Among the factors that particularly influence the effectiveness and capacity of institutions—in addition to a clear allocation of responsibilities among institutions and good coordination mechanisms—are the following:

- The institutions’ degree of independence—
  their autonomy in decisionmaking on
financial matters and on political-administrative matters, including the establishment of criteria for appointment and removal from office.

- Their *accountability* to the various agents in society, including civil society, the agents subject to regulation, the government bureaucracy, and elected officials. The legal framework helps establish and determine the conditions for these characteristics, although the culture and habits determining their enforcement are equally important.

The degree of *stakeholder participation* and *transparency* of the decisionmaking process are important mechanisms for achieving a better balance between independence and capacity, on the one hand, and accountability, on the other. Various studies have shown that without a broader knowledge of the issues in society and without involvement of communities, nongovernmental organizations (NGOs), and other groups in putting pressure on the government for change, little will be done. A capacity-building effort seeking to change the environmental management in a country should therefore strive to build knowledge and resources in other parts of society as well, including the private sector, social groups, and authorities.

The objective of this study is to help improve the design and effectiveness of Bank-financed environmental ID projects. The study supports this objective by reviewing and drawing lessons from experience with the environmental ID portfolio to date. Among the issues addressed are the need for and appropriateness of Bank-financed stand-alone environmental ID projects, their results in terms of improved environmental management or improved environmental conditions, and their performance in relation to the overall country and Bankwide portfolios. The study also focuses on the appropriateness of the tools available and used to support ID objectives and on whether the incentives for task managers are appropriate for promoting these goals.

This review is not meant to propose an ideal model for setting up or improving environmental capacity in a country. As the review demonstrates, models that are successful in one country may prove inappropriate and ineffective in another. However, some description and definition of what capacity building and institutional development entail is useful when trying to evaluate project performance. Box 1 briefly summarizes some of the institutional models adopted by different governments in the environment sector.

In light of the increasingly severe resource constraints on the Bank's capacity to assist in the preparation of projects, the purpose of this study goes beyond recommending additional or corrective measures that should be taken by the Bank prior to Board approval. Even though institutional development does require that the Bank have a good initial understanding of institutional conditions, it is well recognized that there are diminishing returns to further efforts in this respect as long as the traditional project cycle paradigm prevails. The paper therefore looks at the conditions and incentives within countries that affect the context, design, and implementation of environmental ID projects and suggests better ways for the Bank to collaborate and provide support. The review also examines the extent to which the Bank has *any* comparative advantage in supporting certain kinds of environmental projects. That is, can implementation shortfalls be remedied by "doing more and doing better"—or do they reflect an inappropriate decision to go ahead with a project that might have been premature or that did not enjoy the full support of the relevant authorities in the borrowing country?

In that sense, this study is not intended to duplicate the responsibility of the Bank's Operations Evaluation Department (OED) for assessing the outcome of individual projects. Rather, it takes a broader approach that asks to what extent stand-alone environmental projects have succeeded in efficiently and sustainably yielding tangible benefits and how the Bank could be more effective in addressing the challenges of environmental ID, both in countries and within the Bank. The paper places particular emphasis on reviewing the appropriateness of project objectives and the
Introduction

Box 1
Environmental Institutional Models

When establishing a regulatory framework for the environment sector, a number of questions must be answered in order to find the most appropriate structure for a given country. Should regulation be led by a technical or a political group? Who should appoint regulators, where should they be from, and how long should they serve? What are the checks on abuse of regulatory power? How independent should an agency be? Who participates in the decisionmaking process? The answers to these questions depend on the country's socioeconomic, cultural, institutional, and political structures.

The administrative structures of national environmental systems vary considerably. Some countries, such as Canada, Germany, Mexico, and Spain, have a full-blown ministry, with one or more technical and action-oriented agencies providing support. In Canada's very decentralized system, provinces have considerable power over both policy preparation and enforcement; in Mexico, most responsibilities for environmental management are concentrated at the federal level. In the United Kingdom, environmental management is one of three areas of responsibility of the Ministry of Environment, Transport and the Regions. In the United States, the main environmental authority is the Environmental Protection Agency (USEPA), an independent agency that reports directly to the president. Chile follows an alternative model in which responsibilities are decentralized horizontally with the aim of mainstreaming environmental concerns into all aspects of economic activity. A high-level coordinating body ensures integration of environmental concerns and avoids capture by individual ministries.

The symbolism of a ministry devoted entirely to the environment is probably most important when a government wishes to make a visible change in the direction of strong pro-environment policy. There are, however, problems associated with this model. One is overlap between the responsibilities of the environmental ministry and those of sectoral ministries. Another is that the existence of an environmental ministry may lead to a lack of concern with environmental problems on the part of other ministries, increasing the policing role of the environmental ministry. Furthermore, an environmental minister is unlikely to want to be seen as having only a controlling, constraining, and policing role; there will always be an incentive to broaden the ministry's functions to include significant spending activities.

In almost all countries, the ministry of environment (or the equivalent) is responsible for environmental policies, while a separate environmental protection agency carries out their technical implementation. Typically, the national environmental agency has the primary responsibility for regulating air and water pollution, hazardous waste disposal, noise, nuclear safety, and, in many cases, the protection of nature. However, many environmental issues cut across the mandates of several ministries and agencies. The particular distribution of environmental protection functions in a country will be influenced by the nature of the most serious environmental problems and the types of institution traditionally involved in the regulation of the economic sectors that are the main contributors to environmental problems.

degree to which project implementation reflects those objectives.

The study consisted essentially of a desk review of all 28 Bank environmental ID projects. Staff appraisal reports (SARs), forms 590, memoranda to the President, back-to-office reports (BTORs) of supervision missions, midterm reviews, and other documents were examined, and selected task managers were interviewed. During the preparation of this study, the authors participated in supervision missions for two projects, in Mexico and Poland. The study drew on a previous study on capacity development and the environment (Margulis and Vetleseter 1996a) prepared by the same authors for the Organisation for Economic Co-operation and Development (OECD). That study benefited from contributions from counterparts in selected countries (Brazil, The Gambia, Nicaragua, and Poland), and some of these perspectives were incorporated in the current paper.

Chapter 2 of this paper summarizes key statistics on the Bank’s environmental ID portfolio and examines the objectives, components, and activities involved in the various projects. Chapter 3, the core of the paper, reviews the major problems and challenges faced by the projects in their context, design, and implementation stages. Chapter 4 summarizes the main lessons and recommendations of the study.

Endnotes

3. Even though the words “institutions” and “organizations” are used interchangeably in everyday speech, a distinction between the two can help clarify the source of weaknesses in a country and thus shed light on how to help change or strengthen the institutions in question. Institutions are the “rules of the game”—shared codes of conduct that influence human interaction. Organizations are the structures of groups of “players” connected by common objectives and goals. Marriage is an example of an institution; schools and churches are examples of organizations. Many government agencies are both institutions and organizations (Berryman, Boyle, and others 1997; de Capitani and North 1994).

4. Even though the words “institutions” and “organizations” are used interchangeably in everyday speech, a distinction between the two can help clarify the source of weaknesses in a country and thus shed light on how to help change or strengthen the institutions in question. Institutions are the “rules of the game”—shared codes of conduct that influence human interaction. Organizations are the structures of groups of “players” connected by common objectives and goals. Marriage is an example of an institution; schools and churches are examples of organizations. Many government agencies are both institutions and organizations (Berryman, Boyle, and others 1997; de Capitani and North 1994).
The Bank’s Environmental Institutional Development Portfolio

The Bank has typically contributed to institutional development through lending operations, economic and sector work, and, mainly, technical assistance. Its active environmental ID portfolio, in which institutional strengthening is a primary objective, consists of 28 projects covering 26 countries in all regions. The oldest project started in 1990, and the first project to close did so in 1997. Currently, the pipeline contains 20 new projects that are expected to become active between 1997 and 2001. The total cost of the active projects is $1.5 billion, to which the Bank is contributing $800 million. Table 1 summarizes basic information on this portfolio.

As can be seen from Table 1, environmental ID projects are often small, reflecting the relatively low financial cost of technical assistance and capacity building; 13 projects are less than $21 million each. The average cost for all the projects is $54.6 million, but it is pushed up by a few relatively very large projects that combine ID with other environmental investment components. Seven of these “mixed” projects combine ID with biodiversity conservation or natural resource management (“green” issues), 4 with industrial or urban pollution problems (“brown” issues), and 5 with both green and brown issues. Looking at the regional breakdown, projects in Africa are more likely to be for freestanding technical assistance. The loans tend to be significantly smaller than elsewhere and are often linked to national environmental action plans (NEAPs). Projects in Latin America and Africa are more likely to incorporate green issues and those in European countries, brown ones. At present, Asia and Latin America receive the most funding, but the largest number of projects in the pipeline are in Europe, the Middle East, and Asia (see Table 2).

Project Objectives

The objectives of environmental ID projects are often very broadly stated and tend to be focused on the process of creating or strengthening an institution rather than on outcomes. Statements of objectives are often blurred with the description of project components. The most commonly given objectives are institutional strengthening or building, strengthening of environmental legislation and policies, development of environmental management capacity, and attention to priority problems, all of which are quite vague. As discussed later, the ID objectives of mixed projects tend to be more focused because the problems to be addressed are more specific. Annex B shows a matrix of the objectives of all the projects.
Table 1: Active environmental institutional development (ID) projects through fiscal 1997
(millions of U.S. dollars)

<table>
<thead>
<tr>
<th>FY</th>
<th>Country</th>
<th>Project</th>
<th>IBRD/IDA share</th>
<th>Total project cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>Brazil</td>
<td>National Environment Project</td>
<td>117.0</td>
<td>166.4</td>
</tr>
<tr>
<td>1990</td>
<td>Madagascar</td>
<td>Environment Program I</td>
<td>26.0</td>
<td>156.0</td>
</tr>
<tr>
<td>1990</td>
<td>Poland</td>
<td>Environment Management Project</td>
<td>18.0</td>
<td>27.3</td>
</tr>
<tr>
<td>1991</td>
<td>Mauritius</td>
<td>Environmental Monitoring and Development</td>
<td>12.4</td>
<td>20.5</td>
</tr>
<tr>
<td>1992</td>
<td>Indonesia</td>
<td>BAPEDAL Development Technical Assistance</td>
<td>12.0</td>
<td>15.0</td>
</tr>
<tr>
<td>1992</td>
<td>Mexico</td>
<td>Environmental Project</td>
<td>50.0</td>
<td>126.6</td>
</tr>
<tr>
<td>1992</td>
<td>Nigeria</td>
<td>Environmental Management</td>
<td>25.0</td>
<td>37.9</td>
</tr>
<tr>
<td>1992</td>
<td>Pakistan</td>
<td>Environmental Protection and Resource Conservation</td>
<td>29.2</td>
<td>57.2</td>
</tr>
<tr>
<td>1993</td>
<td>Bolivia</td>
<td>Environmental Technical Assistance</td>
<td>3.7</td>
<td>5.5</td>
</tr>
<tr>
<td>1993</td>
<td>Chile</td>
<td>Environment Institutions Development</td>
<td>11.5</td>
<td>32.7</td>
</tr>
<tr>
<td>1993</td>
<td>China</td>
<td>Environmental Technical Assistance</td>
<td>50.0</td>
<td>76.0</td>
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<tr>
<td>1993</td>
<td>Ghana</td>
<td>Environment Resource Management</td>
<td>18.1</td>
<td>35.9</td>
</tr>
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<td>1993</td>
<td>Korea, Rep. of</td>
<td>Environmental Research and Education</td>
<td>60.0</td>
<td>97.3</td>
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<td>1994</td>
<td>Gambia, The</td>
<td>Capacity Building for Environmental Management</td>
<td>3.0</td>
<td>5.0</td>
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<td>Korea, Rep. of</td>
<td>Environmental Technology Development</td>
<td>90.0</td>
<td>156.0</td>
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<td>1994</td>
<td>Morocco</td>
<td>Environmental Management</td>
<td>6.0</td>
<td>10.8</td>
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<td>1995</td>
<td>Benin</td>
<td>Environmental Management</td>
<td>8.0</td>
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<td>Honduras</td>
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<tr>
<td>1995</td>
<td>Trinidad and</td>
<td>Environmental Management</td>
<td>6.2</td>
<td>10.5</td>
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<td></td>
<td>Tobago</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1996</td>
<td>Uganda</td>
<td>Environmental Management, Capacity Building</td>
<td>11.8</td>
<td>15.2</td>
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<td>1997</td>
<td>Ecuador</td>
<td>Environmental Management Technical Assistance</td>
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<td>1996</td>
<td>Colombia</td>
<td>Urban Environmental Management</td>
<td>20.0</td>
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<td>1996</td>
<td>Sri Lanka</td>
<td>Environmental Action</td>
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<td>20.8</td>
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<td>India</td>
<td>Environmental Management, Technical Capacity</td>
<td>50.0</td>
<td>61.5</td>
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<td></td>
<td></td>
<td>Building Technical Assistance</td>
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<td></td>
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<tr>
<td>1996</td>
<td>Madagascar</td>
<td>Second Environment Program (Madagascar II)</td>
<td>30.0</td>
<td>155.0</td>
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<td>1996</td>
<td>Malawi</td>
<td>Environmental Management</td>
<td>12.4</td>
<td>13.7</td>
</tr>
<tr>
<td>1996</td>
<td>Zambia</td>
<td>Environmental Support Program</td>
<td>12.8</td>
<td>20.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>834.5</td>
<td>1,529.0</td>
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Table 2: Number of projects and costs by Region through fiscal 1997

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of projects</th>
<th>Total project cost (millions of U.S. dollars)</th>
<th>Average project cost (millions of U.S. dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>10</td>
<td>398.3</td>
<td>39.8</td>
</tr>
<tr>
<td>Asia</td>
<td>7</td>
<td>484.0</td>
<td>69.1</td>
</tr>
<tr>
<td>Europe and Middle East</td>
<td>3</td>
<td>232.9</td>
<td>77.6</td>
</tr>
<tr>
<td>Latin America and the</td>
<td>8</td>
<td>414.0</td>
<td>51.8</td>
</tr>
<tr>
<td>Caribbean</td>
<td></td>
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</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>1,529.2</td>
<td>54.6</td>
</tr>
</tbody>
</table>
Project Components

Environmental ID projects have an average of 4.1 components and a large number of subcomponents. The mixed projects have the highest number of components—between 25 and 30 each in Chile, Madagascar, and Mauritius, for example. Development or strengthening of environmental policies and regulations, institution building or strengthening, and training and development of human resources are the most frequently listed components and are cited in virtually all projects. Environmental information, education, and awareness are given more attention than is apparent from the description of objectives. Encouragement of local and stakeholder participation is still not given a great deal of weight, although there is a clear trend toward emphasizing it in the most recent projects. Table 3 shows the components of all the projects. (See Annex C for greater detail.) Box 2 briefly reviews typical activities financed by environmental ID projects.

Table 3 Components of environmental ID projects

<table>
<thead>
<tr>
<th>Activity</th>
<th>Component</th>
<th>Number of projects</th>
<th>Approximate cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional performance</td>
<td>Institutional restructuring and strengthening</td>
<td>25</td>
<td>48.4</td>
</tr>
<tr>
<td></td>
<td>Training and development of human resources</td>
<td>24</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td>Decentralization and development of local capacity</td>
<td>16</td>
<td>66.6</td>
</tr>
<tr>
<td></td>
<td>Participation</td>
<td>9</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>Coordination and streamlining of responsibilities</td>
<td>6</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>Establishment of new agency</td>
<td>5</td>
<td>155.4</td>
</tr>
<tr>
<td>Policies and instruments</td>
<td>Development of environmental policies</td>
<td>20</td>
<td>56.6</td>
</tr>
<tr>
<td></td>
<td>Development and review of legislation and regulations</td>
<td>18</td>
<td>44.5</td>
</tr>
<tr>
<td></td>
<td>Strengthening of environmental assessment capacity</td>
<td>6</td>
<td>12.0</td>
</tr>
<tr>
<td>Information, monitoring, and education</td>
<td>Environmental information systems</td>
<td>20</td>
<td>87.3</td>
</tr>
<tr>
<td></td>
<td>Environmental education and research</td>
<td>17</td>
<td>191.7</td>
</tr>
<tr>
<td></td>
<td>Public awareness</td>
<td>15</td>
<td>22.0</td>
</tr>
<tr>
<td></td>
<td>Strengthening of environmental monitoring</td>
<td>12</td>
<td>57.9</td>
</tr>
<tr>
<td></td>
<td>Studies</td>
<td>12</td>
<td>22.1</td>
</tr>
<tr>
<td>Financing mechanisms</td>
<td>External resources administration and economic analytical capacity</td>
<td>4</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Notes: The costs presented in this table are approximate and depend on how well the costs of individual actions are specified in the SARs. When only the overall component cost was available, costs have been distributed uniformly among the major subcomponents. Contingencies, taxes, project administration, and other costs are not included in the table. For the mixed projects, which are the more expensive ones, all sector components not directly related to ID were excluded. After making all these adjustments, the total costs presented in this table account for only 51 percent of the total project costs given in Table 1.

** Costs mixed with those for other components.
Typical Activities of Environmental ID Projects

Institutional Performance

In principle, all ID activities are intended to improve institutional performance, directly or indirectly, and virtually all SARs call for establishing, reforming, strengthening, or supporting environmental institutions or environmental management capacity. The most common specific ID activities are restructuring institutions, clarifying responsibilities, coordinating with other government agencies, training staff, upgrading equipment, improving capacity to enforce regulations, and promoting decentralization and development of local capacity.

Policies and Instruments

All environmental ID projects involve some environmental policy or legislation component. In many cases, the project is the first stage in a process of assessing the current legal structure and needs, and it often includes studies to identify areas of concern, overlaps, and new areas to be developed. The most frequently mentioned legislative actions include review and preparation of environmental legislation, procedures, and guidelines for environmental impact assessments; studies on the use of economic instruments; and various sectoral policies and instruments, such as policies for management of tropical forests and marine environments, river basin conservation, and biodiversity protection (green issues) and for water and air pollution control and the management of solid and hazardous wastes (brown issues).

Information Systems, Data Management, and Monitoring

Seventeen projects include some element for improving environmental information systems. The justification is that such systems facilitate sharing and coordination of environmental data and information among agencies, thus promoting institutional coordination and improving data quality and overall environmental management. In 11 of the projects, the objective is to establish a whole new environmental information network or system. In some cases, the systems have a more specific focus such as geographic information (Poland), biodiversity (China), oceanography (Mauritius), coastal zones (Brazil), legal environmental issues (Chile and Honduras), or various brown issues (Chile, Mexico, and Russia). A few projects (Brazil, Madagascar, and Pakistan) include the establishment of geographic information systems (GIS) and involve buying equipment, establishing information centers, and training people to improve data collection, analysis, and dissemination. Monitoring activities include design and installation of monitoring networks, development of indicators, and analysis of information.

Financing Mechanisms

Several projects have components and initiatives for addressing financial issues. In most such cases (11 projects), these take the form of analysis of the implications of current macroeconomic practices, examination of possible changes in incentive structures and policies, and economic studies of selected environmental issues. Five projects seek to involve the private sector in environmental management. Sectoral projects or components often include the creation of environmental funds with the objectives of, for example, supporting natural protected areas or abating pollution in specific regions or ecosystems. Eight projects establish funds or credit lines for environmental management and environmental projects, such as funds for community-based projects in Ghana, India, Sri Lanka, and Zambia and for financing pollution abatement in Morocco and Russia.
Box 2 (continued)

Education and Research

Educational activities target primary schools (eight projects) and universities (five projects). In both cases, the main focus is on the production of teaching materials, development of environmental curricula and establishment of environmental university programs, teacher training, and (in Sri Lanka) collaboration with NGOs on education. Nine projects have environmental research components or subcomponents that seek to establish priorities and strategies for environmental research and focus on a green or brown investment component.

Public Awareness Campaigns

Twelve projects have designed public awareness campaigns as a way of encouraging broader participation and understanding and of building capacity and consensus for the promotion of environmental programs and policies. The target audience for these exercises is the general public, with a strong focus on local communities and rural people. In half of the public awareness campaigns, the emphasis is on community leaders and regional NGOs, both as targets for education and as conduits for spreading information. In a few projects, the public awareness component extends to different layers of government agencies—in the case of Morocco, up to the ministerial staff. Media campaigns are most frequently used to reach the broad public, through television and radio programs, posters, bulletins, and newsletters. A few projects (Chile, The Gambia, Ghana, and Morocco) emphasize the need to develop and use the skills of NGOs and local governments in both the development and the implementation of these campaigns.

Trends

The short time span involved and the relatively small number of projects make it hard to point out clear trends in project design over time or among regions. Some features, however, do stand out, in addition to the regional trends already mentioned:

- Recent projects put more emphasis on participation and community-based efforts.
- There is a tendency toward pilot efforts and decentralization to states or local communities.
- Newer projects tend to introduce economic or financial mechanisms.
- The new projects are somewhat smaller than the older ones.
3 Challenges and Problems in Environmental ID

Institutions are rooted in the socioeconomic and political contexts of the societies around them. Their effectiveness and behavior are influenced by informal structures and values, as well as by the more easily identified formal ones. Changing and influencing institutions therefore does not involve simply making formal changes in organizational structures, legal and regulatory frameworks, or office hardware; it also means changing attitudes (the "institutional culture"), the knowledge base, and informal modes of interaction. Such efforts will invariably be slow and gradual, as they are likely to encounter resistance from entrenched interests. If ID initiatives are to succeed, political will and commitment to ID initiatives—"ownership"—are needed within the country, and governments must lead the process of strengthening their own institutions. External technical assistance may be helpful in facilitating changes and activities when human, technical, or financial resources are limiting factors, but goals and values cannot be imposed by external technical assistance, nor can such assistance do much to make up for lack of local ownership and commitment.

In the case of environmental ID, there are additional challenges:

- Environmental issues are cross-sectoral in nature and require a high level of coordination by people and organizations that often have not interacted before.

- The concerns and approaches introduced are often relatively new, and there is likely to be a lack of knowledge and understanding of the issues, both by the country leadership and by the public at large.

- The institutions that are being strengthened or that are charged with implementing the projects are typically very young, without clearly defined responsibilities. An established framework in the form of strategies, general sector policies, and incentives is frequently lacking.

A variety of internal problems may negatively affect the Bank's own environmental ID efforts:

- The current incentives for task managers promote larger projects, even though this is not what is required for ID. The incentives also induce task managers to focus on the approval of projects rather than on transfer of skills and improved management capacity. The emphasis on
project approval may lead managers to give less attention to country factors that may negatively affect projects, such as the overall macroeconomic and political context, the level of real commitment to and ownership of a project, and the actual capacity of agencies to implement the project. These predispositions are, again, particularly harmful in the case of ID objectives.

- While the traditional World Bank project cycle has been relatively adequate for infrastructure development in stable economies with well-established institutions and predictable government policies, one-time investments with limited Bank involvement in supervision are not well suited for providing the support and flexibility needed for a continuous, gradual capacity-building effort.

- The widespread use of “blueprint” solutions may be particularly inappropriate for ID because of the specific characteristics of individual countries and institutions.5

This section identifies and analyzes the above problems as they apply to the Bank’s environmental ID portfolio and describes possible solutions. Although ID is of course a process, it is clearer to divide the analysis according to three stages of the current project cycle: context, design, and implementation.

**Context**

The decision, by a country and by the Bank, to launch a project is not always based on the most urgent or high-priority needs and limitations in the country. Several factors determine the appropriateness of a project’s timing:

- **Macro conditions in the country**—the prospects for economic and political stability.

- **Political support**, which depends on factors such as the understanding of issues among senior decisionmakers, the project’s relevance in terms of responding to their priorities, and the degree of public awareness and pressure.

- The existence of strategic and analytical work underlying the proposed activities, such as specific sectoral (environmental) strategies that outline priorities and coordination with other sector policies, as well as the government’s overall approach to institutional reforms (specific ID strategies for the public sector). On the Bank side, environmental ID projects require a country-specific ID strategy, as well as integration with broader environmental strategies and the Country Assistance Strategy (CAS).

**Macro conditions**

Macroeconomic conditions in a country, as well as the overall political climate, obviously influence an ID project’s chances of success. Although this is true of other kinds of projects as well, economic and political instability can be particularly damaging to capacity building in a new sector, where consistent political support and transfer of resources are needed.

Looking at indicators such as inflation rates and growth of gross national product (GNP), as well as at the performance of the entire Bank portfolio in the relevant countries, it becomes clear that there is a connection between the macroeconomic problems facing a country and its overall portfolio performance. For instance, the three projects with the
longest records of unsatisfactory performance were in Brazil, Mexico, and Nigeria, which confronted long or acute periods of macroeconomic or political crisis. Even though it is difficult to predict macroeconomic and political upheavals over the lifetime of a project, the risk factors for a project are higher in countries with a history of instability, and it is crucial to assess realistically the implications of such conditions. The task managers and country teams who prepare the assessments must be given the right incentives to make realistic evaluations of country conditions without any pressure to develop a project if the overall context is not appropriate.

**Political support and ownership**

Without government ownership, efforts by external agents are doomed to failure simply because the beneficiaries themselves are not really interested in the first place. Environmental institutions or departments within such institutions are often interested in and involved with a project, but too frequently political support from other areas and higher levels of government is missing or slow to develop. Such political support depends on the importance of the issues and the projects to senior politicians, which in turn depends on their understanding and knowledge of environmental problems and the prominence of these issues on the national agenda. Public pressure plays a key role in ensuring that environmental issues are placed on politicians' agendas, but it has not gathered the same force in terms of public activities and pressure groups in developing countries as in industrial countries. The public awareness campaigns initiated in a large number of projects are attempts to build a wider knowledge base about the issues and to generate public pressure.

It is difficult for external agents to determine the degree of political commitment or the level of ownership of a project by governments. The SARs are a relatively poor source of such information, since both task managers and governments have incentives to claim a high degree of political commitment prior to project implementation in order to ensure approval. A number of SARs contain some kind of policy letter from the government indicating its commitment to the sector or ensuring institutional coordination. Still, these are nonbinding documents, and it is not until the project becomes effective that the actual degree of commitment can be determined.

Perverse incentives for overoptimism about commitment are more prevalent and more detrimental in the poorest countries, where, without political support, environmental problems will not, and perhaps should not, be given priority attention. As in the case of macroeconomic and political conditions, these incentives must be changed. An increased reliance on resident missions, which are now assuming growing importance in the Bank, may be particularly helpful in this respect. Box 3 illustrates some of the specific issues in the Mexico Environmental Project.

**Strategic work**

Because a minimal organized institutional and policy framework is, or should be, a prerequisite for starting investment projects, environmental ID projects have often been launched as one of the first steps in Bank assistance to environmental management in a country. It is natural that a certain volume of studies, analytical work, and statements of priorities for the environment sector be incorporated into the project itself. Although the ID process should be thought through prior to project implementation, most developing countries lack specific institutional and political support from other areas and higher levels of government is missing or slow to develop. Such political support depends on the importance of the issues and the projects to senior politicians, which in turn depends on their understanding and knowledge of environmental problems and the prominence of these issues on the national agenda. Public pressure plays a key role in ensuring that environmental issues are placed on politicians' agendas, but it has not gathered the same force in terms of public activities and pressure groups in developing countries as in industrial countries. The public awareness campaigns initiated in a large number of projects are attempts to build a wider knowledge base about the issues and to generate public pressure. (see Box 4). NEAPs and other strategic documents such as country assistance strategies, in turn, too often fail to realistically assess the actual priority governments give to the environment or to identify what specific problems cause weak institutional capacity and what specific problems result from it. Institutional strengthening will prove ineffective if such problems are not clearly identified beforehand.
Examination of SARs indicates that only 12 of the 28 projects in the environmental ID portfolio are based on clearly identified strategies. The majority of these projects are in the Africa region and are follow-ups to NEAPs. In some cases, such as Bolivia and Russia, the projects specifically aim, among other objectives, at the preparation or strengthening of policies, strategies, and coordination. The project in Pakistan was launched in parallel with the country’s NEAP. In some countries, such as Benin, Honduras, and Mauritius, strategies or NEAPs exist, but the extent to which the respective projects specifically address these strategies is not clear. Although not many projects clearly indicate a link to strategic work, there is a definite trend in this direction. Among the 12 projects based on well-identified strategies are the 5 most recent ones, those for India, Madagascar, Malawi, Sri Lanka, and Zambia.

**Project Design**

Even when a project is conceived in accordance with government strategies in an overall positive political climate and with well-established priorities, the way it is designed may lead to difficulties during implementation and ultimately to failure. Portfolio reviews and project evaluations, including the recent portfolio improvement program reviews by the Quality Assurance Group (QAG), have repeatedly shown that poor quality at entry is a major source of project failure. Design features that have been shown to affect performance include clarity of objectives and components; project complexity and assessment of risks; realism; design of indicators; flexibility, innovation, and piloting; decentralization and stakeholder participation; and attention to project sustainability.

**Box 3**

**The Mexico Environmental Project in the Country Context**

Environmental degradation in Mexico has long been a significant problem, and the government’s capacity to address it properly has usually been limited. The Mexico Environmental Project was the first World Bank project in the sector in Mexico. At the time of project preparation, the institutional needs of the environmental agency were enormous: the legal and regulatory framework was fragmented, and the agency suffered from poor technical and analytical capabilities, obsolete or inadequate physical infrastructure, and weak capacity to coordinate with other sectors of the government. The need for a project combining financial support, technical assistance, and upgrading of analytical capabilities was obvious. However, because of weak overall capacity, there were no clear strategies and priorities for analyzing the problems, defining priorities, or determining the most cost-effective actions. For its part, the Bank had only limited experience with this type of project; at the time, there was only one other stand-alone environmental project. As a result, the project design was overambitious, with far too many components of relatively high complexity, and relied on an institution (SEDUE) with limited implementation capacity.

In addition to the concern within the environmental agencies, there were political difficulties. Neither the timeliness nor the appropriateness of the project was unanimously accepted by all segments of the government. Despite improving macroeconomic conditions, the government’s senior decisionmakers regarded both the environmental sector and the Bank’s involvement in it with great suspicion. In fact, there was resistance even within the sector. Other sectors of government, particularly the Planning and Finance secretariats, were skeptical about the Bank’s involvement, the severity and importance of environmental issues in the country, and, in particular, the proposed project, the actions to be financed, and SEDUE’s capacity to implement the project. Thus, while the deficiencies of the sector clearly called for some action to support and reinvigorate it, political support was largely absent from the beginning. Ultimately, SEDUE and the Bank did too little to inform and negotiate with the more powerful Secretariat of Finance with a view to bringing it on board and helping launch the project with greater vigor.
Box 4
Environmental vs. Sectoral Agencies

Even in industrial countries, "mainstreaming" of environmental issues is far from complete. Yet it is necessary as a way of ensuring buy-in on the part of traditional and powerful players, increasing capacity by utilizing existing resources, and preventing duplication of effort. Some projects have addressed the need to mainstream by establishing central agencies to provide leadership in setting an environmental agenda, establishing priorities, and coordinating policies and initiatives, leaving the implementation and day-to-day handling of projects and actions to the relevant sectoral agencies.

Chile Environment Institutions Development (Fiscal 1993)
The existing environmental institutional framework in Chile is moderately mainstreamed, with a National Environmental Commission (CONAMA) consisting of the ministers for planning and cooperation, economy, and other sectors with potential influence on the environment and an Operational Committee that includes all ministers with environmental competencies. There are also regional and provincial environmental commissions, chaired by local government authorities, that include the directors of the Ministerial Regional Secretariat and representatives of community and social organizations. Prior to the project, responsibilities had been spread among various sectors and institutions, resulting in turf battles and redundancies. Accordingly, the project aims to strengthen CONAMA and its Technical and Administrative Secretariat and so build up CONAMA's role as the coordinating organization for the national effort on environmental policies and issues. The intention is for CONAMA to support rather than replace the work and responsibilities of the sectoral ministries by helping define the policy framework and by providing service functions such as environmental data collection, analysis, and training in environmental assessment.

Sri Lanka Environmental Action 1 (Fiscal 1997)
Institutional weaknesses in Sri Lanka included unclear definition of responsibilities, lack of coordination among government entities, and shortage of adequate staff resources. The project is designed to restructure the Ministry of Transport, Environment and Women's Affairs for better policy planning and coordination and to strengthen the Central Environment Authority (CEA) to carry out its analytical, monitoring, and enforcement responsibilities. Part of the CEA's tasks will be contracted out to allow the agency to concentrate more efficiently on a limited number of critical facilitating and regulatory activities. As a complement to this project, other donor agencies are planning to assist in strengthening the environmental management capacities of the line ministries and provincial government institutions.

Other solutions include establishing environmental liaison units in sectoral agencies (Honduras, Madagascar II, and Uganda) and establishing environmental management procedures for all agencies involved with issues affecting the environment. It is especially important to ensure involvement and understanding of the issues by the ministries of planning and finance, which generally appears to be a neglected area in the ID portfolio. Exceptions include the creation of an environmental unit in Nigeria's Federal Ministry of Budget and Planning and the establishment of a similar unit in the Central Bank in Chile for integrating environmental accounting.

Clarity of objectives and components

As noted above, the Bank does not yet have a framework for appraising institutional capacity. This lack may have led task managers to take an ad hoc approach; important factors such as agencies' limited degree of independence or accountability tend to be left out. The projects also tend to ignore relevant political factors and conditions that affect the fundamentals of institutional rules and practices, assuming that Bank projects can be restricted to "technical" issues only. The result is that the
project objectives related to ID are often too broadly stated and the specific actions to be taken are unclear. With a few exceptions, the objectives are vague: strengthening institutional capacity, developing environmental management capacity, developing environmental legislation, and assisting in the implementation of strategies and plans. In most cases, the emphasis is more on the ID process than on substantive outcomes; only five projects specify environmental improvements on the ground as an objective. When the goals are presented in such abstract terms, it is difficult to relate them directly to components or to more tangible improvements in the institutions or in environmental conditions.

The usefulness of the SARs as good sources of information on the details of project activities is extremely variable. Some describe activities, rationales, approaches, and expected outcomes in great and logical detail, while others sketch the activities broadly without always making it clear what instruments will be used, how the activities will further the stated objectives, or what the long-term outcomes are expected to be. In some cases this may be due to a conscious effort to keep the design flexible, allowing for the gradual and unpredictable nature of capacity-building efforts and awaiting the outcome of studies and piloting. Flexibility of design is increasingly being introduced in recent projects, such as India, Madagascar II, and Sri Lanka. However, if the specifics of the components and activities are to be kept flexible, it is all the more necessary to define the process for determining future steps and to ensure that the longer-term goals are explicit and tangible. The reliance on broad and abstract objectives goes some way toward explaining the frequently weak links between project objectives and their components. Similarly, the links between components and improved environmental conditions and management are weak in the majority of projects: it is taken for granted that stronger institutions automatically lead to better environmental conditions or to better environmental management and that there is no need to specify further how these objectives are to be achieved.

It is interesting to compare mixed projects, which involve investment, with stand-alone capacity-building technical assistance projects in this respect. Since the mixed projects are for specific activities in a sector, it is plausible that they would have very specific objectives. In general, this is true except for the two Korean technical assistance projects, which are narrowly focused on research and education. Projects with green or brown components are more likely to have concrete objectives focusing on the sector, and there is also generally a closer logical connection between objectives, components, and expected outcomes. For example, Indonesia's BAPEDAL project, which has a brown component, aims to strengthen the capacity and role of environmental management and pollution control agencies to design pollution control measures and to implement them centrally and regionally. The components include review of laws and procedures for pollution control, development of pollution control procedures, and strengthening of regional pollution control agencies. In the Brazil project, learning by doing has been emphasized as an important contribution to increased capacity. The implications of this approach, however, are not clear.

A focus on sectoral agencies or issues may have the advantages of greater unity and clearer priorities, but it may also risk perpetuating a fractured, uncoordinated approach to environmental issues and management. The solution, it seems, is to do both stand-alone and mixed projects and to focus on sectoral issues and agencies according to the established priorities for the environment in the country.

Project complexity and assessment of risks

The relative complexity of a project is influenced by several factors, of which the number of components and subcomponents might be the most obvious. However, the most critical risk factor is the type of activity to be performed by the institution itself vis-à-vis its capacity. Considerations such as number of donors, number of implementing agencies, number and type of sectors involved, and the degree of integration of the different components also affect how difficult
the project will be to coordinate and thus to implement. Many projects, for instance, particularly the mixed ones, have a large number of components and subcomponents; Chile, Madagascar, and Mauritius have between 25 and 30 subcomponents each. The mixed projects are also the ones that involve the greatest number of sectors, implementing agencies, and donors: 11 donors other than the World Bank are involved in the Madagascar project, 8 in Mauritius, 4 in Nigeria, and 3 in Ghana. As mentioned earlier, the cross-sectoral nature and relative novelty of environmental issues increase the amount of coordination needed, especially in the early stages of a project.

In general, the risks identified in the project documents appear relevant and are strikingly similar to the list of actual implementation problems found in forms 590, supervision mission BTORs, and similar documents. They include weak and young institutions, lack of or discontinuity in government commitment, opposition from vested interests, lack of qualified staff, lack of knowledge of the issues involved, and uncertainties about macroeconomic stability and counterpart funding. This, of course, raises questions as to whether these issues simply have not been handled sufficiently well or whether these are problems that are inherently impossible to avoid but could be minimized.

Realism

Projects are often designed to do too much too quickly and do not tailor the technical assistance to specific local needs and conditions. This shortcoming typically results from limited institutional analysis prior to project design and, mainly, from lack of realism as to the actual capacity and ownership of the institutions. One of the classical areas in which such problems occur is in information systems. Dimensioning and preparation of master plans, training, acquisition of computers, software, GIS, and similar activities in Bank environmental projects have too often failed because the technologies were not appropriate to local conditions and capacities. The problem is not so much in the execution of the activities as in absorption by local institutions and shortcomings in the actual utilization of such systems for improved environmental management. Box 5 summarizes the experience with technical assistance for information management in Rio de Janeiro.

The temptation to cover all bases immediately can be partly understood, considering that the whole ID area is new and largely underdeveloped. A number of early projects (for example, in Brazil, Madagascar, and Mexico) were especially ambitious, with broad and comprehensive agendas that were to be implemented by young, inexperienced agencies. This is frequently mentioned as a lesson learned in the later projects. There is something to be gained from an integrated approach, however. Thus, in Madagascar II a great deal of effort was made to improve the coordination of donors, and the need for realistic objectives was clearly incorporated into the follow-up phase.

There are signs that later projects are aiming to initiate changes on a smaller scale. Average project cost is decreasing significantly, from an average of $53.7 million per project in 1990 to only $22.1 million per project in 1997. Few very large projects have been designed in the past three years, except for Russia, and there is a more explicit acknowledgment of the need to start slowly and to increase the scale of a project only when there is evidence that technical assistance has led to institutional strengthening.
The environmental agency in Rio de Janeiro, FEEMA, had, in addition to its administrative files, three main databases: for the monitoring department, for the pollution control department, and for licensing and public complaints. These systems were entirely independent of one another, incompatible because of software and hardware variations, and unavailable to the vast majority of staff. The Inter-American Development Bank (IDB) had made a $800 million loan for a pollution control project, of which $20 million was for institutional strengthening of FEEMA. Roughly $1 million was allocated to creating a modern network-based information system within the agency. One and a half years after project launch, only one part-time consultant was working in the agency on trying to understand the system and to prepare a master plan for system implementation. Two and a half years after project launch, only 20 computers had been bought, and system design had yet to be completed. In all likelihood, the remaining funds would have been spent in the same way if an alternative model had not been introduced in parallel.

Aware of the critical need to create an information system that unified the various databases and was accessible to the entire agency, FEEMA's directorate requested support from the federal National Environmental Program (PNMA), which was financed by the Bank. PNMA funded a highly specialized information management specialist who spent 6 months within the agency, working closely with the three departments, teaching the fundamentals of information management to the key people, and working in a friendly atmosphere conducive to learning. All the directors and technical people gave their full political support. The three databases were quickly integrated, and an information management system was implemented. Despite its few resources, the technical assistance project was extremely successful; it was able to overcome political rivalries and resistance, training took place in parallel to delivery of results, and the main experts felt ownership of the work. The IDB information systems component, however, remains dependent on the large "traditional" technical assistance package and is still held up in the bidding bureaucracy.

**Design of indicators**

Defining ID precisely is difficult, and the scope of activities in the projects under review is broad. The qualitative, slow, nonlinear nature of institutional development makes the design and use of indicators for monitoring progress extremely difficult. For example, in the process of creating an information system within an agency, it is easy to monitor the number of computers bought or of people trained, but evaluating usage of the system in terms of quality of analysis and policy recommendations is more complicated. The indicators almost invariably focus on quantifying steps in the implementation process, while the longer-term objectives and the impacts on institutional capacity and the environment are rarely considered. To add to this problem, when the objectives are stated in broad, vague terms, as is usual, it is difficult to tie them to concrete actions and impacts and thus to progress indicators.

Overall, the provision and design of indicators for these projects are weak. In only 12 of the projects is there any attempt to provide indicators, and of these, about 7 attempt to quantify them in terms of number of laws passed, staff trained, and the like. A few do mention longer-term impacts and attempt to incorporate them into the indicators and the monitoring schedule. The Sri Lanka project, in particular, is a good example of an attempt to point to the expected and measurable longer-term impacts of project activities. These statements are always extremely qualitative but at least give a clear objective for the exercise and an ultimate goal other than the specifics of implementing each subcomponent.
Challenges and Problems in Environmental ID

Flexibility, innovation, and piloting

Since environmental institutions worldwide have their own specific histories and sociocultural environments, each ID project has its own peculiarities. The context within which the project is being developed is also unique: the degree of government ownership and political support, the existence of specific strategies for the sector, the severity of environmental problems, the level of expertise of local staff, political and macroeconomic stability, and similar contextual factors all call for a flexible design of projects, avoiding overly standardized approaches that may not suit individual situations.

Experience with alternative modes of technical assistance or project design has been limited. A few projects, particularly the more recent ones, have introduced innovations in certain components and pilots. In Sri Lanka, for instance, various pilot initiatives have been attempted in different areas: NGO assistance in local soil conservation programs; an 18-month pilot exercise in use of a new monitoring network design; an experiment with private entities in environmental enforcement through a cost-effective process; and a pilot improved incentive system for staff in the Central Environmental Authority. Interesting experiences in other projects include an NGO environmental action fund for discrete environmental mitigation action projects (India); an application of a three-tiered organization involving the central environmental authority, selected sector ministries, and a local government, with the aim of undertaking a joint work program and strengthening the agencies' environmental functions and cross-sectoral work (Morocco); a pilot environmental information system to try to improve the flow of data in three regions (Chile); various sectoral components such as a pilot multidisciplinary approach to small-scale mining (Ecuador); a pilot program for land and microwatershed management with community involvement (Ghana); and a pilot industrial waste minimization program (China).

Experience with incorporating lessons from previous projects has also been limited because of the relatively young age of the environmental ID portfolio. Lessons from ID in other sectors have been at least partly incorporated. The lessons most frequently quoted in the SARs include the importance of involving the private sector, local communities, and NGOs and the need for better project coordination, strong political commitment, additional time and detail in project preparation, emphasis on supervision and monitoring, good databases, and training to ensure availability of qualified personnel. More "radical" changes to conform the project cycle and the modes of technical assistance to the specific needs of environmental ID may still be lacking. In Madagascar a good critical review of lessons from the country's first environmental ID project is included in the SAR and incorporated in the design of the second project (see Box 6).

Decentralization and participation by stakeholders

Because a large number of environmental problems are local, it is reasonable to assume that their management should be largely carried out at the local level. In most countries, there has been a movement toward sharing environmental management responsibilities with local governments. In many developing countries, however, central environmental agencies themselves have limited institutional capacity, and initial efforts have focused on strengthening them, leaving local capacity in environmental management as limited as before. The efforts toward decentralization thus have to be accompanied by training and by involvement of relevant local stakeholders, such as representatives from the scientific community, universities, NGOs, professional associations, and major polluters. Fourteen projects in the portfolio include activities aimed at strengthening regional and local environmental institutions and, in the case of India and Uganda, even extend to the preparation of state environmental action plans (see Box 7 for India).
Box 6

Madagascar II ID Project: Lessons from the First Project

The first phase of Madagascar’s Environment Program was completed in 1996, and the fulfillment of the program’s objectives is generally seen as satisfactory. Phase two followed immediately. Included in the development of the second project was a detailed analysis of the first one. The key lessons emphasized were the following:

- **Impact evaluation.** No efforts had been made to evaluate the impact of the policy framework on the environment, nor had sufficient attention been given to evaluation of the costs and benefits associated with environmental protection activities, which is seen as critically important.

- **Environmental management strategy.** Under the second phase, a regional and local approach to biodiversity conservation has been developed, to be complemented by agricultural and other income-generating activities. Environmental strategies need to put greater emphasis on rural development and smallholder land management on lands experiencing high population pressure.

- **Institutions.** Building capacity in new institutions has taken more time than anticipated and has absorbed much of the effort of the program. However, it is clear that results have been achieved. The next step is to clarify the institutions’ roles and mandates vis-à-vis other central government agencies.

- **Program scope.** Although the integration of all activities supporting the environment into one program was a conscious choice made to foster priority-setting on a national scale and coordinate donor funds, it also created a project that was relatively complex for management by young institutions. The next phase will be kept integrated in the same way, but existing management mechanisms will be improved to ensure that the government’s capacity to implement the program is not exceeded.

- **Sustainability.** The financial sustainability of the country’s environmental efforts has not received enough emphasis, and with 90 percent of the current cost of environmental management being paid by foreign development agencies, the long-term sustainability of some of the activities is uncertain. This is especially true for the conservation parts of the program.

- **Community involvement.** Working with the communities concerned, in both the preparation and implementation of a component, is crucial. Ownership increases the speed of implementation, as well as the sustainability of the impact.

With regard to participation, acceptance of and compliance with environmental policies depend on the extent to which lower levels of government, industries, and other regulated entities perceive the goals and objectives of environmental policies as feasible and fair. Consensus among stakeholders is therefore fundamental in determining the ultimate success of environmental policies, and participatory mechanisms have to be in place. Participation is also critically necessary because the public has a right to expect that environmental policymakers will act according to publicly expressed environmental objectives and that government officials will be able to implement policies. There has been a marked development over time in the attention given to participation in the environmental ID portfolio, both in the development of priorities and strategies and in their implementation. Participation remains weakest, however, in project design. Where an NEAP is prepared prior to the project, the process has typically been claimed to be participatory, but it is often difficult to find traces of acknowledged or planned participation. In later projects such as India, Madagascar II, Malawi, Sri Lanka, and Zambia, the need for participation at all stages of a project is emphasized and appears to be carried through in project design (see Box 8). Earlier examples of participation include efforts to establish a permanent environmental planning process with close cooperation with other agencies, NGOs, and the public (Honduras) and to work together with NGOs and other local groups in public awareness programs and education (The Gambia, Ghana,
Morocco, and Uganda). In the investment components, there is also a move toward more community-based projects with a high degree of participation.

Box 7
Decentralization

Fourteen of the ID projects involve some form of decentralization of environmental decisionmaking or strengthening of state, municipal, or local capacity. In many instances, the decentralization components are miniature versions of countrywide projects, covering legislation, management, training, information management, and establishment of environmental protection agencies or similar institutions. However, they also offer the opportunity to address issues much closer to the source of a problem, to test approaches and technologies on a smaller scale, and to promote active community and stakeholder participation.

In the earlier projects, such as those in Brazil and Mexico, the approach was still very centralized, with limited participation by stakeholders, and was barely described in the SAR.

Brazil National Environment Project (Fiscal 1990)

The initial design of the project gave primary attention to strengthening the recently established national environmental protection agency, IBAMA, and supporting federal conservation units. Since the midterm review evaluation in 1994, much of the project's focus has been on decentralized approaches to natural resource management. This emphasis has reinforced the existing support to environmental protection activities by state environmental agencies in three key ecosystems: the Atlantic Forest, the Pantanal wetlands, and the coastal zone.

Mexico Environmental Project (Fiscal 1992)

More than in the case of Brazil, the Mexico Environmental Project was fundamentally aimed at improving the environmental management capacity of the federal environmental agency, SEDUE. The project contained a component to test decentralization of front-line pollution control and natural resources management in a few states. An investment plan was to be developed for each of the five states selected, in cooperation with the central agency; the plan would include technical assistance to refine organizational structure, training, information technology, and implementation of substantive projects. Progress on effective transfer of front-line functions would be monitored by a coordinating group, and disbursements for investment projects would be conditional on agreement on a detailed action plan for the state, on mechanisms for transfer of services described in the action plan, and on the state's commitment to cover recurrent costs.

In later projects, such as that in India, the focus has shifted more to the community level, with a much stronger emphasis on participation and piloting. (See also the case of Zambia, described in Box 8.)

India Environmental Management (Fiscal 1997)

The Environmental Management project involves strengthening the regional offices of the Ministry of Environment and Forests and the Gujarat State Department of Forests and Environment. Three subcomponents are designed to promote the decentralization of environmental management: a national environmental awareness campaign that includes decentralization to the state departments of environment, linking it to community-based environmental action campaigns; a review of the established environmental brigades and support for an accelerated five-year program to establish and train new ones; and creation of an Environmental Action Fund to support community-based environmental mitigation projects to be carried out by NGOs.
The projects in Malawi and Zambia are good examples of the stronger emphasis placed on participation and community-based management in a number of the more recent projects. Since both are new, the evaluation is based on the preparation process and the design of the projects. Both projects followed NEAPs that were produced by highly participatory processes, involving the government, the private sector, NGOs, and traditional leaders.

**Malawi Environmental Management (Fiscal 1997)**

All four components of the Environmental Support Program (ESP), of which the Bank's Environmental Management project is one, have strong community aspects, particularly the community-based environmental management component. The focus is on gradually transferring management of natural resources away from the government to local communities, which has already begun on a pilot basis in parts of the country. The aim of the component, which will fund small-scale environmental activities originating in communities, is to build community capacity in both urban and rural areas. The component is divided into two stages: in the first, community environmental management plans will be prepared by environmental management committees; in the second, the management plans will be financed from a "microprojects" window.

**Zambia Environmental Support Program (Fiscal 1997)**

Zambia’s NEAP was the first plan to identify and bring together the most influential actors in the environmental field. Key issues include (a) the promotion of traditional institutions and community participation to create a demand-driven culture for more sustainable use of natural resources and (b) the gradual transfer of primary responsibility for environmental conservation and management to the people. A workshop that actively involved the key stakeholders was organized to maintain momentum in the consultative process. One component establishes a pilot environmental fund to help finance community-based projects. Others aim to strengthen community environmental management by actively involving communities in environmental planning, decisionmaking and implementation, and environmental education and awareness.

Although we understand that decentralization and, in particular, participation are fundamental aspects of capacity-building efforts, the limited experience of the portfolio does not allow us to unequivocally state that the Bank's environmental ID projects tend to be more successful when decentralization or participation are incorporated in project design.

That does not weaken the case for strongly supporting and promoting both issues in Bank-financed projects. In addition to ample evidence in other reports (see, for instance, *The World Bank Participation Sourcebook*, World Bank 1996c), participation is a basic factor that introduces transparency in the decisionmaking process, accountability of decisionmakers, and a much better exchange of information among all relevant parties—governments, polluters, and affected communities.

**Project sustainability**

The activities financed by a project need to be sustainable in the long term. If they are not, one can question whether real institutional development has taken place at all. Sustainability of actions financed in ID projects is indeed a reason for concern because these projects are rarely one-time capital investments. The results achieved and the activities initiated have to be continued by the borrowers and financed by them without the Bank's financial support once a project is completed. Project sustainability is therefore closely connected to issues of financing and borrower ownership. The process of implementation will be the best indicator of
the future sustainability of a project and the willingness of the borrower to keep the activities going.

Earlier projects do not appear to have paid sufficient attention to sustainability issues, and less than half of the SARs address the question of sustainability directly. Exceptions among the early SARs are perhaps the Poland and Bolivia projects. The newer projects are more likely to include a separate section discussing sustainability, although here too it is not always clear what is being done to address the problem. Key concerns include integration of natural resources management aspects into macro and sector levels, recurrent costs, attracting and retaining qualified staff, and political commitment. Efforts to lessen the risks include minimizing new structures and staff, ensuring participation and capacity building at the community level as a way of taking some of the burden off the government (Malawi), funding recurrent costs and salaries on a declining basis through implementation (Madagascar II, Sri Lanka) or from the government budget from the start (Poland), and raising revenues through cost recovery and fees (Sri Lanka, Trinidad and Tobago). Box 9 summarizes experience with creating funding mechanisms to ensure the sustainability of actions.

**Box 9**

**Sustainability and Funding of Environmental Work**

The financial viability of environmental projects past the closing date is a general worry, and few attempt to come up with new or innovative ways to ensure funding for continued activities. An exception is the establishment of funds or credit lines, which are found in quite a few projects and are often tied to investment and sector activities. Most of these funds are found in the more recent projects—Chile, Ghana, Honduras, India, Nigeria, Russia, Sri Lanka, and Zambia. The following are examples of such funds in the areas of natural resource and pollution management.

**Predominantly Natural Resource Management**

*Ghana Environmental Resource Management (fiscal 1993).* The land and water management components include a development fund to provide incentives for farmers to adopt improved land management practices in the short run until long-term benefits become apparent.

*Sri Lanka Environmental Action I (fiscal 1997).* A community initiatives component is designed to involve communities in implementing demonstration environmental activities through participatory methods and to help train them in participatory work. The fund will seek proposals from local government institutions, community groups and NGOs, and research organizations, for amounts between $5,000 and $100,000. It will address priority areas of the updated NEAP, including improved land and water management, solid and domestic waste collection, and environmental education and mass awareness. That there was a demand for the fund was established through consultations between the ministry and NGOs. Eligibility criteria include cost-effectiveness, ability to mitigate environmental problems and poverty, replicability, and ability to meet maintenance costs on completion of the activity. The initial focus will be on proposals emphasizing training for skills to prepare and manage activities.

(continued)
In addition to the seven factors identified above, the Bank's routines and its project cycle clearly affect the design of a project. Because of limited experience with ID projects, particularly in the environmental field, "classical" Bank-style projects have been employed for ID objectives. With the increased realization of the importance of well-prepared institutions for carrying out projects and programs in any country, the question arises: How can the World Bank project cycle be modified to produce better outcomes in ID projects? "The synchronization of project disbursement with the time it takes to bring about institutional change has been a neglected area of project design. An average Bank project is completed in 6-8 years. Organizational change in institutions does not take that long, but to institutionalize those changes takes much longer than the duration of a single project" (Boyle 1998). This requires a model different from that offered by the current project cycle. More emphasis should be placed not only on the implementation and supervision phases of a project but also on greater flexibility, participation, piloting experiences, multiphase programs, and mainstreaming. Recently, there has been a move toward using such approaches in the Bank in environmental and other projects (see Box 10). The introduction of adaptable lending may be a further promising mechanism for ID projects. However, as holds true for any organization, the Bank needs time to institutionalize these new experiences (see Margulis and Vetleseter 1996b).
Several environmental ID projects have been developed based on the recognition that ID is a long-term process and that capacity should develop gradually through programs and building-block projects.

**Madagascar Environment Program I (Fiscal 1990) and II (Fiscal 1997)**
Madagascar's fifteen-year Environment Program is based on a NEAP prepared in 1988 as a collaborative effort between the government, the Bank, NGOs, and other donors aiming to strengthen the country's management of natural resources in three five-year stages. The first phase focused on creating a proper policy, regulatory, and institutional framework. The second, now being implemented, will consolidate programs started under the first phase, and the third will strive to mainstream environmental concerns into macroeconomic management and sector programs. Both the NEAP and the first phase were developed with a large input from external sources because of the low capacity in the country, but by the time the second phase was designed, capacity had been so strengthened that national institutions led the preparations, in a country-driven participatory process.

**Russia Environmental Framework Program (Fiscal 1995)**
The Russian Environmental Framework Program was developed by the Bank, in a role of a facilitator, together with the Russian government and bilateral and multilateral donors. It is intended to be an overarching framework for incorporating environmental and natural resource management concerns directly into the economic, social, and political adjustment process at the federal and regional levels of government. By strengthening and streamlining institutional structures, policy and strategy formulation and implementation, management systems, and financial delivery mechanisms for environmental and natural resource management, the program attempts to set priorities and coordinate activities in the sector funded by a number of different sources, including the Bank. The Environmental Management Project (see Annex A) is implemented under the umbrella of the framework program.

**Zambia Environmental Support Program (Fiscal 1997)**
The objective of the Environmental Support Program is to mainstream environmental and natural resources management at the national and local levels. Based on the NEAP and the country assistance strategy, as well as on the government's development strategy, the Zambia program is designed as a long-term multidonor effort to finance environmental projects and to ensure that the concerns are dealt with in a holistic manner that includes sector ministries and local communities. The active involvement of the various stakeholders in program formulation has been emphasized to build ownership, facilitate implementation, and guarantee that the projects are in tune with local capacity. The support is seen as the first stage in a long-term commitment to improving environmental management. It is designed to allow for flexibility in implementation and responsiveness to emerging priorities by keeping the scope and ambition limited to piloting activities before developing full-fledged national activities. Lessons learned in this program will be incorporated into a second phase of NEAP implementation, continuing the strengthening of institutions and interventions in priority areas.

Some other projects are explicitly designed to be first steps in prolonged assistance to strengthen environmental management in a country; they seek to test pilot activities before launching larger investment components. Among them are the Pakistan Environmental Protection and Resource Conservation project (1992) and the Sri Lanka Environmental Action I project (1997). In addition, the government of Malawi has developed an Environmental Support Program that is intended as an umbrella framework for incorporating strategies, policies, and priority programs to address environmental problems. The program covers the actions of a number of actors and donors, including the Bank's Malawi Environmental Management project (1997).
Project Implementation

The environmental ID portfolio is a young one, and only the projects in Poland and Mexico had been closed at the end of fiscal 1997. With most projects still in the middle or start-up phases of implementation, it is necessary to be very cautious about coming to strong conclusions about their implementation performance or longer-term impact. There are, however, some interesting points and valuable lessons based on experience so far, and some conclusions can be drawn from the development of the portfolio in the past few years. Our review of project implementation excludes the seven youngest projects, which have been in effect for less than a year.

Relative performance

Operational Services Department (OPR) ratings, recorded in the Annual Review of Project Performance (ARPP), indicate that the Bank’s environmental ID portfolio performance has improved in the past three years in relation to the Bank’s portfolio as a whole, to all Bank projects stated to have environmental objectives, and to the whole Bank portfolio of technical assistance projects (see Table 4).

Table 4 Comparative performance of environmental ID projects (percentage of problem projects)

<table>
<thead>
<tr>
<th>Item</th>
<th>FY 94</th>
<th>FY 95</th>
<th>FY96</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental ID</td>
<td>31.3</td>
<td>6.2</td>
<td>14.3</td>
</tr>
<tr>
<td>All Bank projects</td>
<td>18.4</td>
<td>13.4</td>
<td>16.6</td>
</tr>
<tr>
<td>Bank environmental projects</td>
<td>29.6</td>
<td>0.0</td>
<td>19.1</td>
</tr>
<tr>
<td>Bank technical assistance loans</td>
<td>20.3</td>
<td>9.8</td>
<td>17.8</td>
</tr>
</tbody>
</table>

Note: IP, implementation progress; DO, development objectives. “Problem projects” are those rated unsatisfactory or highly unsatisfactory for IP, DO, or both. There were 16 environmental ID projects in fiscal 1994 and 21 in fiscal 1995 and in fiscal 1996.

As Table 4 shows, during fiscal 1994–96 the performance of the environmental ID portfolio improved significantly compared with other relevant categories of Bank operations. Most notable is the decline in the number of projects rated unsatisfactory on implementation progress (IP), from 31.3 to 14.3 percent, ending up lower than the figure for the Bank as a whole. The drop in the other categories of projects was at most 2 percentage points during the same period. It is interesting to note that the projects which operations departments (as distinguished from the Environment Department) identify as having environmental objectives have seen a similar improvement. In 1994, this category contained a considerably higher number of projects with implementation problems (29.6 percent) than the Bank average (18.4 percent) while two years later the two categories were much closer (19.1 and 16.6 percent of problem projects).

The ratings on the likelihood that projects will meet their development objectives (DO) have stayed roughly level, at considerably lower rates of problem projects than either the Bank portfolio average or the technical assistance loans. Bank environmental projects have an even lower number of problem projects on the basis of this criterion, but a trend is not yet very clear.

Keeping in mind that the environmental ID portfolio consists of a relatively small number of projects, it still appears that portfolio performance for these projects is improving as they mature and as lessons are applied from older projects such as those in Brazil, Madagascar, Mexico, and Poland. However, the development objectives for these projects, especially the ID ones, are both long term and difficult to measure. As noted, it is as yet early to make strong statements regarding the ultimate impact of these projects on the basis of the ratings.
Challenges and Problems in Environmental ID

Performance of the environmental ID portfolio

Currently, none of the 21 projects started before fiscal 1997 is considered at risk of being unsuccessful in terms of being rated unsatisfactory on either implementation progress or development objectives. However, a number of projects were recently updated from unsatisfactory to satisfactory, including those in Mexico, Morocco, Nigeria, and Russia. In all, 10 projects have experienced serious implementation problems, 3 of them (Brazil, Mexico, and Nigeria) over more than one period. Those three countries experienced major macroeconomic or political crises in the course of project implementation, and the projects there were among the earlier projects.

As has also been found in reviews of other sectors, there appears to be a clear pattern whereby ID projects are more likely to face problems toward the middle of the implementation period (Table 5).

The Brazil and Mexico projects received unsatisfactory supervision ratings in the ARPP three or more times and Nigeria and Morocco, twice. Six projects received one unsatisfactory rating, and 11 projects have always been satisfactory.

Table 5 Environmental ID projects rated unsatisfactory, by project age

<table>
<thead>
<tr>
<th>Year of implementation</th>
<th>Number of projects</th>
<th>Number of IP or DO projects (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>6 or more</td>
<td>15</td>
<td>0</td>
</tr>
</tbody>
</table>

Few projects are considered to be doing really well. Projects in Korea (fiscal 1994) and Benin are rated highly satisfactory on development objectives, and the recently completed Poland project was, in the end, considered highly satisfactory, both in its implementation and in meeting its development objectives. The fiscal 1993 Korea project and the project in The Gambia were considered highly successful. The latest forms 590 rate most projects satisfactory on implementation progress (18 out of 21) and development objectives (16 out of 21).

Common implementation problems

Bank-financed projects are a joint effort by governments and the Bank, and the problems encountered during implementation can originate from either party. For instance, complex Bank procedures may interfere with implementation progress as a result of inadequate Bank training of counterparts in these procedures, improper assessment of local capacity, or actions by the government’s own bureaucracy, which the Bank has little capacity to influence. (Examples are local procurement rules, regulations on importation of equipment, and the like.). Since the roles of the parties and the incentives they face differ, we distinguish some of the problems as originating separately from Bank and from government failures. It is not the intent here to make an exhaustive analysis of all problems that occur in the implementation of environmental ID projects but only to summarize the common problems encountered.

Borrower factors affecting implementation

Political and economic environment. Examples of problems are national political issues and leadership changes (Nigeria); parliamentary
ratification procedures (Benin, Trinidad and Tobago); election periods that affect the national agenda (Benin); delays in meeting effectiveness conditions (Russia); macroeconomic difficulties (Brazil, The Gambia, and Mexico); and laws being stalled in the legislature (Bolivia). Such problems clearly interfere with all sectors in the economy and thus take precedence in government agendas. Many SARs foresee periods of political and macroeconomic changes in the course of project implementation, but it is difficult to judge ex ante whether the changes warrant more cautious actions by the Bank or governments regarding the project.

**Lack of political will and counterpart funding.** It is clearly very difficult to evaluate identify the level of political support on the basis of project documents and supervision reports alone, but this factor is one of the most frequently stated reasons for unsuccessful or unsustainable project implementation and can be especially detrimental to ID projects. Lack of counterpart funding is perhaps the most obvious manifestation of lack of political will. Even though this can result from “legitimate” financial problems (e.g., in periods of structural adjustment with tight budgetary constraints) or from bureaucratic difficulties, especially when too many government agencies are involved, strong political support helps minimize such difficulties. Lack of counterpart funding has occurred in several environmental ID projects, including those in Bolivia, Ghana, Nigeria, Trinidad and Tobago, and Uganda. In many cases, the project money is used to cover recurrent costs, indicating a lack of government resources or will to follow up once the project is closed, which would threaten its sustainability.

**Institutional “rigidity” and tensions.** Public sector laws often force actions financed by a project to go through lengthy bureaucratic procedures, with little flexibility for expediting solutions. In addition to such rigidities, ID projects often face resistance from staff within the main environmental agencies and from other institutions that have to do with environmental issues. Lack of cooperation with outside consultants (Brazil), lack of communication and cooperation between agencies (Brazil, Indonesia, and Madagascar), personality issues between ministers and the project coordination unit (Honduras), and failure of the executive agency to obtain adequate cooperation from participating agencies (Morocco) are examples of such resistance and lack of cooperation. The cross-sectoral nature of environmental issues and projects increases the need for coordination and exposes rigidities more readily than is the case in other sectors. Such problems have been encountered in the early phases of several projects but have typically been ironed out in the course of project implementation (Brazil, Madagascar).

**Bank factors affecting implementation**

**Inadequate staff for supervision.** ID projects are highly labor-intensive and typically require closer and more intensive supervision than other types of projects. This and other portfolio reviews indicate that Bank management clearly does not provide adequate resources for supervision. The main reason is Bank incentives that have tended to give more emphasis to project design than to implementation and results on the ground. Among the few exceptions is the Environmental Management Project in Poland, which significantly benefited from the willingness of the regional management to allocate adequate resources for supervision during the entire duration of the project. This was one of the key factors contributing to successful project implementation and completion.

**Task manager turnover.** The average task manager turnover on environmental ID projects is 2.2 years. Where long-term dialogue and commitment need to be established between Bank and borrower, frequent task manager turnover is clearly negative for a project. It may be a sign of instability, it can interrupt continuity, and some time is usually lost before the new task manager is fully on board with respect to all project initiatives. In a review of the biodiversity portfolio, a correlation was found between the frequency of task manager turnover and problem projects (see Annex D). A similar link has not been conclusively found.
with environmental ID projects, even though the average task manager turnover is close to the 2.1 years for biodiversity. Because of the small number of ID projects, conclusions should be drawn with caution.

Complex Bank procedures. The Bank has always been strongly committed to the use of competitive procurement procedures, which can be relatively complex for governmental institutions in developing countries. When the host agency has no previous experience in working with the Bank—the case with nearly all the projects under review—procurement and disbursement procedures can cause complications and delays without well-planned, effective support for developing these skills (as in China, Honduras, and Poland).

One way of ensuring such support is to provide an adequate number of qualified experts or to train local people in the necessary Bank procedures. Local staff are often not available (as in Indonesia) or are not able to work full time on the tasks (as in The Gambia and Morocco), so outside experts may be needed. An important factor cited in the success of the Poland project was the strong emphasis on ensuring effective local capacity to carry out Bank procurement and disbursement procedures (see Box 11).

Other factors affecting project implementation

Delayed effectiveness. In a high number of projects, there has been a considerable delay in effectiveness, often resulting in disbursement lags (Benin, Brazil, Madagascar, Morocco, and Nigeria). Our review suggests that there is no automatic or necessarily strong link between effectiveness delay, or a slow start, and subsequent failure to reach the project's development objectives. Both can be part of a learning or consensus-building period that will later be to the benefit of the project. The ultimate outcome will depend on the cause of the delay and the measures taken to improve the situation.

Box 11

Procurement and Disbursement in Poland

The design and implementation of Poland’s Environment Management Project included an extremely strong emphasis on the development of procurement and disbursement skills. The same procurement specialist participated in the Bank’s preappraisal and appraisal missions and in all main supervision missions. During the preparation and start-up phases, Polish specialists received extensive procurement and disbursement training and advisory support. With experience, the Polish personnel responsible for procurement and disbursement became highly effective in using competitive procedures and efficient disbursement methods for a wide range of projects, and they also provided advisory support to other ministries concerning these issues. They became skilled in the preparation of terms of reference and technical specifications for the procurement of goods and services. This process included not only personnel from the project implementation unit and local implementation units but also a wide range of Polish specialists from local governments and applied research institutes. These personnel rapidly learned to make practical assessments of budget tradeoffs and became adept at negotiating with suppliers. The effective use of international competitive procurement procedures by Polish specialists for the Bank-supported project resulted in significant cost savings on a wide range of procurement actions. These savings were reprogrammed by the Ministry of Environment and allowed for a significant expansion of project-supported activities for air quality management and water resources management.
Project too complex. Possible problems related to complex project design have been discussed above. The degree of complexity of any project is a function of local capacity to absorb and implement the proposed activities, which can be difficult to evaluate prior to implementation. Given that the agencies involved are generally new, weak, or both, complexity has been a source of difficulty for several projects (Brazil, Morocco, Pakistan) and has in a number of cases led to simplification and restructuring of the projects. The key in these cases, of course, is flexibility on the part of all agents involved, including the Bank (see Box 12 for the Brazilian experience).

Lack of institutional capacity to implement the proposed actions. The underlying problem in failure to handle adequately most of the issues outlined above is weak institutional capacity. This may appear circular, since it is precisely weak institutional capacity that environmental ID projects are designed to address. In this context, the weak capacity is relative to the tasks involved in the project. The failure to properly assess such capacity ex ante has to be attributed to both the Bank and governments and indicates lack of realism and overambitious design. As noted previously, both governments and task managers often have incentives, before project approval, to minimize the disclosure of eventual weaknesses. Administrative weaknesses have caused delays and lack of project coordination (Mauritius, Mexico), lack of communication and of awareness of the objectives of the project (Indonesia), failure to prioritize objectives and initiatives (Pakistan), poor scheduling of overseas training and inappropriate staff assignments (China), absence of detailed programming of activities (The Gambia), lack of ability to identify overseas training opportunities (Korea), and poor monitoring capacity (Mauritius). Shortages or unavailability of qualified staff is another critical problem and can be attributed to a lack of local experts (Indonesia) or to the failure of training programs (Pakistan) but also to low salaries and the incapacity to retain the right people full time (The Gambia, Morocco).

Box 12
The National Environment Project in Brazil

As mentioned in Box 7, the Brazil National Environmental Project (NEP) originally emphasized the strengthening of central government agencies. Following the midterm review, $60 million of the Bank loan was reallocated to support more than 90 resource management projects administered by municipal governments, often with the participation of NGOs and other local groups, in the 20 states that were able to prequalify for funding—in some cases by adopting new legislation or introducing other environmental management improvements. Experience to date suggests that when municipal governments clearly assume ownership of local environmental projects and are able to create good partnerships with other stakeholders, the initiatives take off and are likely to be both replicable and sustainable. NEP funding has also permitted communities to implement or scale up environmental projects that have been underdeveloped because of limited local resources.

The experience at the federal level, by contrast, has been mixed. IBAMA has benefited through the establishment of a state-of-the-art remote-sensing environmental mapping center and a national environmental information system and has improved the management of federal protected areas. However, efforts to reorganize and enhance the institutional effectiveness of the agency have been largely unsuccessful due largely to institutional resistance within IBAMA. After the midterm review, overall coordination of NEP was shifted to the newly created Ministry of Environment, and this contributed to a significant improvement in project performance. Since 1994, the project has also supported a range of institutional strengthening measures for the Environment Ministry. Experience from this project indicates a need for both persistence and firmness on the Bank's part, as well as close supervision and flexibility, as was the case with the substantial reallocation of project resources and implementation responsibilities in midcourse to support decentralized interventions.
Endnotes

5. "Blueprint" approaches are not used in the same generalized way in ID projects as perhaps in the Bank's macroeconomic stabilization programs. Indeed, since there is not even enough dissemination of experience of environmental ID projects within the Bank, the term blueprint may be inappropriate. However, as suggested later in the paper, projects are prepared by teams without sufficient knowledge about the institutions and organizations that they propose to strengthen and without time for solid interactions with counterparts. Thus, very similar actions end up being proposed in inappropriate individual contexts. Classical examples are acquisition of hardware, training of personnel, changes in laws and regulations, and the like in contexts where institutional responsibilities are unclear, staff are not sufficiently motivated, budgets do not cover even operational costs, and project resources are not sustainable.

6. We have not reviewed the larger green and brown investment projects that include an institutional strengthening component. As with the mixed projects, the institutional components of investment projects tend to be more focused, in that they support the departments in the environmental agencies directly responsible for the investments. However, since the institutional components typically represent only a small fraction of overall project costs, they are given less attention than the larger investment components. Examples include the São Paulo Industrial Pollution Control Project, where disbursements were not directly related to the capacity-building components, and the two India Industrial Pollution Control Projects, where the institutional components were systematically ranked as less satisfactory than the investment components. It may be worth exploring this issue in future reviews.

7. Decentralization reduces information costs (residents of a jurisdiction know their own priorities best), and it allows environmental quality and policy instruments to vary across regions according to priorities and budgetary constraints. But decentralization in environmental policy is a mixed blessing for several reasons. Local governments may not set environmental standards high enough or may not wish to properly enforce them; decentralization may lead to tax exporting and can make it difficult to internalize externalities created by spillovers; and local governments often acquire administrative responsibilities without having adequate powers to raise revenues or levy their own taxes. Finally, decentralization may make it impossible to take environmental actions on the required scale, which, for the most significant problems, is generally larger than the territory of a municipality (Margulis 1998).
Lessons and Recommendations

This paper briefly reviews Bank experience with environmental ID projects, identifying the most important issues and problems associated with their design and implementation. Many of these problems are common to other sectors, but some are peculiar to environment. Since the portfolio is relatively young and small, it is too early to draw strong conclusions and lessons from implementation, and it is not easy to detect clear trends on a number of issues. Nevertheless, some trends and lessons can be distinguished, and they point to a few key recommendations that may eventually help improve the design and effectiveness of new and second-generation projects now under preparation. (See Annex E for a summary of project activities.)

Key Lessons

The Bank has realized that lack of institutional capacity is one of the key obstacles to the preparation and implementation of environmental policies in developing countries. This has led to the development of a large number of environmental ID projects over the past six years. Although most such projects are considered “satisfactory” by the Bank’s ARPP system, when the outcomes in terms of improved environmental management and improved environmental conditions are set against the resources allocated to these projects, the results have often been frustrating. One reason is that the Bank’s perception of the vital importance of institutional strengthening has not been matched by a parallel understanding of the processes through which institutional changes take place. This has led to a huge allocation of money when the real need was for attitudinal and cultural changes. The Bank has not formed a core team of institutional specialists in the environmental field, nor does there appear to be a good network within the community of practice in this area.

How much time it will take the Bank to change the incentives given to task managers and the tools used in environmental ID projects is important because the Bank may be losing comparative advantage in supporting ID objectives. Money is not the issue in ID; of more importance is that task managers have only a limited understanding of the political, economic, and sociocultural factors at the root of institutional setups and that the Bank’s cross-country experience in this area has been poorly disseminated inside the institution. The Bank’s long-term relationship with governments is an obvious advantage, but it still has to make up for other problems.

Like the institutions that environmental ID projects support, the Bank needs time to change. There is undeniably an ongoing learning process in the Bank with regard to environmental ID, and lessons have been incorporated into both the implementation of the older projects and the design of new ones.

We divide the key lessons of this review into four sets of issues: those having to do with the ID process and project features; those related to the incentives given to task managers; those having to do with the tools available for environmental ID; and those pertaining to governments.
Environmental Capacity Building: A Review of the World Bank’s Portfolio

Process Issues

Government institutions are protective and conservative and are typically resistant to change. Even when there is no resistance, poor working conditions and low staff motivation frequently lead to limited receptivity and commitment to capacity-building efforts. This is a chicken-and-egg situation—improving the motivation of staff is one of the main goals of ID, but ID cannot succeed without involvement and participation by staff—and is one of the main challenges in ID.

ID needs more time than typically anticipated to achieve results and more involvement and effort from the Bank than any other form of assistance. In most cases, five to seven years will not be sufficient to ensure the required cultural changes and a lasting impact on environmental capacity or on environmental conditions.

Too much money may be counterproductive to ID objectives, since large inflows of resources distort the normal modus operandi of institutions and may create conditions that are not sustainable. Also, project implementation units generally administer budgets that are far larger than those of most departments within the same beneficiary institutions, often stimulating the creation of parallel structures which fragment, rather than strengthen or integrate, institutions.

The stated objectives of environmental ID projects are consistently vague and general. More specificity can be introduced only when there is clarity about the concrete problems facing the institution. Since such clarity is frequently absent, stand-alone environmental ID projects are more prone to suffer from vague objectives. By contrast, when ID is in support of investment projects, specific ID needs are automatically identified.

An additional consequence of a vague definition of project objectives is that monitoring of implementation is typically inadequate. Efforts are primarily devoted to monitoring tasks executed (inputs), not the skills absorbed (outcomes).

Incentives for Task Managers

The internal Bank incentives for task managers reward the approval of projects by the Board and so favor project preparation to the detriment of implementation and on-the-ground results. Incentives are also geared toward larger projects and quick disbursements. Such incentives promote overambitious projects that overestimate the real implementation capacity of local agencies; minimize the potential prevalence of inappropriate macroeconomic or political conditions, lack of political support for the project, and absence of coordination by the various agencies and stakeholders; and impose a time frame for task managers incompatible with that required for ID projects (see below).

Tools Available for Preparing ID Projects

Since ID is essentially a process of cultural change, the kind of project needed to promote it has to be different from those that the Bank typically supports. The Bank’s project cycle has proved inconsistent with the flexibility needed for a gradual capacity-building process. The adaptable lending approach is a timely change that may resolve or minimize many of the problems related to the rigid structure of traditional Bank projects.

The Bank’s current approach to technical assistance, whereby its own policies are implemented globally, is often ineffective because country needs vary so greatly. Technical assistance requires country- and sector-specific approaches. Outside-funded technical assistance may temporarily help increase the political clout of an agency, maintain the size of its budget, and raise the level of staff expertise, but these advantages may vanish when assistance is discontinued.

Government Issues

Without ownership and political support, ID projects cannot achieve much. External assistance can help weaker institutions define and perform their legal assignments, but governments and beneficiary agencies must
Lessons and Recommendations

have political motivation to ultimately lead the process “from the inside.”

Because countries’ often see the World Bank’s presence in the environmental field as a validation of their own efforts towards environmental protection, the existence of a Bank-financed environmental project matters more than the actual outcomes.

Governments must have a clear idea as to what they expect when requesting assistance for ID. Thus, there must be in place strategies and priorities for the environment, as well as broader ID strategies for the public sector, so that efforts under environmental ID projects are not made in isolation from other government initiatives and so that they fit into and help support established sectoral policies. (This integration has often been attempted through NEAP exercises.) In fact, in most cases ID efforts address the definition of such policies and strategies simultaneously with capacity building, which delays and complicates the process. In the environment field, in particular, government policies are often driven by outside forces rather than by genuine demand for change.

Recommendations

Given the relatively poor knowledge of institutional cultures, the existing perverse incentives for task managers, the poor internal dissemination of lessons from ID projects in many countries, and its own rather inflexible project cycle, the Bank may not presently have a strong comparative advantage in providing technical assistance in environmental ID. This can be changed, and some of the problems may require relatively little effort and time to overcome. Much depends on Bank management’s understanding of the problems and on its willingness and capacity to act.

The following are some key recommendations for Bank management, governments, task managers, and other agents involved in environmental ID projects that may help improve results.

Clearly define what is to be strengthened. ID projects should initially aim at clarifying the roles and responsibilities of institutions when these are initially ambiguous. Since unclear institutional responsibilities and functions are in turn largely a consequence of lack of broader policies and strategies, environmental ID should support the preparation of such policies and strategies at the outset of projects. In countries that lack environmental policies and strategies and have weak institutional capacity, the temptation to “do everything” must be resisted by identifying priorities and phasing in actions accordingly.

Ensure that governments have ownership of the projects and are fully committed to them. Political support is fundamental for the success of any project. Government agencies involved with ID projects should know precisely what to expect from such projects so that they can be fully committed to them, while leading the process of institutional change. They have to involve eventual beneficiaries and interested parties, and the public more generally, so as to ensure or introduce public pressure and accountability of institutions. The Bank must leave substantive tasks to be performed by beneficiary institutions, engaging them in the process and sending the signal that technical assistance does not have a zero opportunity cost.

Change the type of technical assistance. Technical assistance is successful only if skills and technical expertise are actually absorbed by beneficiary institutions. While lessons from other countries and contexts are always useful, the Bank should tailor its efforts to country conditions. The Bank must improve its knowledge about specific national institutions, making greater use of resident missions and local expertise from universities and selected local consultants. Outside consultants and consulting firms that do not have the time and incentive to interact with and gradually transfer skills to local institutions will face resistance and should be avoided. To ensure that technical assistance actions are sustainable, the longer-term impact of projects should be taken into account in the performance evaluation of staff and of the projects themselves.

Recognize that ID requires a long-term mutual commitment and that the Bank’s project cycle must
adapt. New operating procedures and new lending instruments have to be introduced for dealing more effectively with the process nature of ID. Such new approaches need to be more flexible, changing the rigid project cycle into a more process-oriented effort. Projects should support longer-term programs and pilot initiatives. They should be designed as a series of “building blocks,” with the specific objectives being defined as the project develops, as institutional capacity is gradually accumulated, and as the Bank increases its knowledge of the specific institutions involved. Much greater emphasis must be placed on implementation and thus on supervision, rather than on project design. The Bank’s new adaptable lending system, which aims at providing phased and sustained support for the implementation of long-term development programs, is a promising move toward such flexible systems and should be tried in ID projects.

Make a major effort at the start. The need to shift the focus toward the process of project implementation should not occur at the expense of a major effort at the start of projects, since the project’s “quality at entry” is a key determinant of its likelihood of success. The Bank needs to better understand the history and politics that guide institutional decisions, to build a strong consensus with national and subnational governments and institutions about the importance of the proposed efforts, to realistically assess the capacity to absorb the proposed assistance, and to ensure government commitment to sustain all efforts. Such initiatives, which are required very early in the process of project development, are not directly associated with progress on the ground, so they may be seen as a waste of time and energy and as delaying results. In reality, however, they are an essential and unavoidable price to pay for ensuring ownership and for structuring the long-term commitment that the process of institutional strengthening requires. Within institutions, a process of discussion, education, and information is required at the initial stages of ID programs.

Drastically change the incentives for task managers. Task managers must have incentives to pursue a long-term process with environmental institutions, with small and slow disbursements, and without many obvious and visible immediate changes. This means spending more resources (time and money) in learning about the internal culture of the institutions that are to be strengthened, interacting with staff, and becoming immersed in the process in order to ensure an effective transfer and absorption of skills. Task managers should also have incentives to design small rather than large projects. They should have the time, the objectivity, and the incentives to realistically assess the government’s capacity and effective interest in a project, so that the incentive is not to “push” a project but to create with counterparts the appropriate context and conditions. Incentives can be changed only if senior management has a clear understanding of the perverse effect of the current incentives on institutional development and if it becomes fully committed to changing them. The key to improving the results of the Bank’s environmental ID portfolio thus lies fundamentally with senior management, which is able to change the incentives for task managers.

Look at environmental ID in context. The overall objective of ID projects is to strengthen the environmental management system as a whole, not just an environmental agency in isolation. It is thus important to create partnerships and cooperation in the ID process between the beneficiary agency and other entities involved in environmental issues, such as universities, industries, and NGOs. Key government ministries, especially finance, should be brought on board. Often this means nothing more than exchanging information and making the process more transparent; this is necessary because ID must ultimately be coordinated with mainstream development assistance and linked to political institutions and economic growth. In terms of the Bank’s work, this means integrating the ID perspective into the design of CASs and into all sector strategic work.

Complement stand-alone environmental ID projects with investment projects. Stand-alone ID projects may be necessary to help prepare or strengthen the overall policy framework in the environment field, but the specific objectives
to be achieved and the actions to be financed may be clearer for investment projects.
Investment projects were not reviewed in this study, but it was suggested that they are also not problem-free. (The time frames of investment and ID components are often radically different, and task managers, who have incentives to pressure borrowers to accelerate disbursement, will tend to focus far less on ID components.) While problems with both types of projects have to be addressed, ID objectives will probably best be achieved by a combination of the two types.

Decentralize and foster participation. Central governments have largely failed to address problems that are essentially local in nature, so strategies for decentralization, particularly as regards the execution and enforcement of policies, should be pursued. The current positive, universal trend in environmental ID projects toward decentralization, partnerships, and more direct involvement by local stakeholders must be continued. Projects must also foster public participation and pressure to increase project ownership and make institutions accountable for their work, contributing to a greater likelihood of successful project implementation. More dialogue and negotiation with industries, polluters, and natural resource users is necessary, as is the use of more transparent procedures in government decisionmaking in environmental matters.

Introduce flexibility, simplicity, and moderate expectations. Environmental ID projects have to be simple and flexible, since most of the ideal conditions outlined will not be met, at least at the beginning. Several of the most recent projects appear very conscious of such needs. The temptation to include too many components and subcomponents has to be resisted by prioritizing and by keeping expectations moderate. As mentioned, however, to do this requires changing existing incentives for task managers.

Endnote

8. We did not review projects financed by other institutions and donor countries. This should perhaps be done in future reviews. Comparative advantage refers to the Bank's own potential relative to other agencies.
## Annex A

### Active World Bank Environmental Institutional Development Projects

<table>
<thead>
<tr>
<th>Country</th>
<th>FY</th>
<th>Project name and cost</th>
<th>Project description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>90</td>
<td>National Environment Project ($117.0 million Bank; $166.4 million total project cost)</td>
<td>Strengthen and restructure the national environmental protection agency, IBAMA; consolidate environmental legislation; establish integrated programs for the protection and management of Pantanal wetlands, Atlantic forest, and coast; consolidate conservation units, and create new ones.</td>
</tr>
<tr>
<td>Madagascar</td>
<td>90</td>
<td>Environment Program ($26.0 million Bank; $156.0 million total project cost)</td>
<td>Establish protected areas for biodiversity heritage; watershed management; soil conservation; agroforestry; reforestation; GIS; land boundaries and titling; develop national environmental management capacity and policy.</td>
</tr>
<tr>
<td>Poland</td>
<td>90</td>
<td>Environment Management Project ($18.0 million Bank; $27.3 million total project cost)</td>
<td>Help the Environmental Ministry improve planning, budgeting, and use of economic incentives and analysis for environmental management; improve monitoring of food and soil contamination, hazardous waste management policy, industrial pollution management; develop air pollution management and abatement strategy for Katowice-Krakow; improve water resources planning and management for upper Vistula River basin.</td>
</tr>
<tr>
<td>Mauritius</td>
<td>91</td>
<td>Environmental Monitoring and Development ($12.4 million Bank; $20.5 million total project cost)</td>
<td>Strengthen environmental institutions and prepare national physical development plan and national solid waste management plan; select site and design industrial park; integrated pest management and marine conservation; create national park.</td>
</tr>
<tr>
<td>Indonesia</td>
<td>92</td>
<td>BAPEDAL Development Technical Assistance ($12.0 million Bank; $15.0 million total project cost)</td>
<td>Strengthen BAPEDAL’s enforcement and inspection role by reviewing and supplementing existing laws for pollution control and alternative dispute resolution procedures; strengthen regional pollution control agencies and laboratories; public awareness programs.</td>
</tr>
<tr>
<td>Mexico</td>
<td>92</td>
<td>Environmental Project ($50.0 million Bank; $126.6 million total project cost)</td>
<td>Reform and strengthen environmental institutions at the federal and state levels; prepare for decentralization; develop sectoral strategies and coherent policy framework; strengthen monitoring capacity for air and water pollution, protected areas, wildlife protection and conservation programs.</td>
</tr>
<tr>
<td>Nigeria</td>
<td>92</td>
<td>Environmental Management ($25.0 million Bank; $37.9 million total project cost)</td>
<td>Support main agencies in the design, implementation, and monitoring of appropriate environmental incentive systems; establish environmental data collection systems and information network; carry out studies to identify key projects for alleviating environmental degradation.</td>
</tr>
<tr>
<td>Pakistan</td>
<td>92</td>
<td>Environmental Protection and Resource Conservation ($29.2 million Bank; $57.2 million total project cost)</td>
<td>Strengthen key environmental institutions, legislation, and policies; watershed and rangeland rehabilitation and development, reforestation and wildlife refuge management.</td>
</tr>
<tr>
<td>Bolivia</td>
<td>93</td>
<td>Environmental Technical Assistance ($3.7 million Bank; $5.5 million total project cost)</td>
<td>Strengthen institutions with environmental responsibilities; strengthen environmental legal and regulatory framework; promote environmental education in the primary school system.</td>
</tr>
<tr>
<td>Chile</td>
<td>93</td>
<td>Environment Institutions Development ($11.5 million Bank; $32.7 million total project cost)</td>
<td>Establish and strengthen the institutional framework for managing environmental protection and conservation; update the legal and regulatory framework; strengthen environmental assessment; promote environmental education and carry out small environmental projects at the community level; support priority sectors: forestry, mining, antipollution strategy, air and hazardous waste inventory.</td>
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<tr>
<td>Country</td>
<td>FY</td>
<td>Project name and cost</td>
<td>Project description</td>
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<tr>
<td>China</td>
<td>93</td>
<td>Environmental Technical Assistance ($50.0 million Bank; $76.0 million total project cost)</td>
<td>Support the Chinese Ecosystem Research Network and Biodiversity Research and Information Management; strengthen the National Environmental Protection Agency, university-level education systems, monitoring and information systems; support environmental assessment capacity.</td>
</tr>
<tr>
<td>Ghana</td>
<td>93</td>
<td>Environment Resource Management ($18.1 million Bank; $35.9 million total project cost)</td>
<td>Develop national environmental resource management system; strengthen environmental institutions, educational education, public awareness; develop environmental information systems; launch pilot for improved land and water management involving local communities; management of five coastal wetlands.</td>
</tr>
<tr>
<td>Korea, Rep. of</td>
<td>93</td>
<td>Environmental Research and Education ($60.0 million Bank; $97.3 million total project cost)</td>
<td>Assist selected colleges of agriculture and veterinary sciences to upgrade their capacity for environmental research and teaching.</td>
</tr>
<tr>
<td>Gambia, The</td>
<td>94</td>
<td>Capacity Building for Environmental Management—Technical Assistance ($3.0 million Bank; $5.0 million total project cost)</td>
<td>Establish capacity within the National Environmental Agency by introducing environmental management processes; develop strategy for environmental education; improve environmental information management.</td>
</tr>
<tr>
<td>Korea, Rep. of</td>
<td>94</td>
<td>Environmental Technology Development ($170.0 million Bank; $256.0 million total project cost)</td>
<td>Strengthen selected natural research institutes to identify and address environmental issues and undertake environmental research and development; strengthen the planning and policy role of the Ministry of Environment.</td>
</tr>
<tr>
<td>Morocco</td>
<td>94</td>
<td>Environmental Management ($6.0 million Bank; $10.8 million total project cost)</td>
<td>Strengthen technical and institutional capacity in the Under Secretariat of the Environment; sector ministries, and local governments; enhance and update regulatory framework and enforcement systems; promote environmental education; establish national environmental information network.</td>
</tr>
<tr>
<td>Benin</td>
<td>95</td>
<td>Environmental Management ($8.0 million Bank; $9.3 million total project cost)</td>
<td>Strengthen the National Environmental Agency; decentralize environmental planning; monitor regulatory framework; establish environmental information management and monitoring system.</td>
</tr>
<tr>
<td>Honduras</td>
<td>95</td>
<td>Environment Development ($10.8 million Bank; $12.5 million total project cost)</td>
<td>Strengthen the Ministry of Environment; improve environmental planning and legislation, implement environmental assessments, national environmental information system, local capacity building.</td>
</tr>
<tr>
<td>Russia</td>
<td>95</td>
<td>Environmental Management ($110.0 million Bank; $194.8 million total project cost)</td>
<td>Strengthen environmental institutions and policy; pilot projects for air quality management, safe water, river health and water conservation, hazardous waste management, pollution abatement facility, biodiversity strategy and conservation.</td>
</tr>
<tr>
<td>Trinidad and Tobago</td>
<td>95</td>
<td>Environmental Management ($6.2 million Bank; $10.5 million total project cost)</td>
<td>Operationalize the environmental management authority; support participating agencies involved in environmental management; support priority work programs.</td>
</tr>
<tr>
<td>Uganda</td>
<td>95</td>
<td>Environmental Management, Capacity Building ($11.8 million Bank; $15.2 million total project cost)</td>
<td>Support environmental institutions in building capacity at local and national levels; establish National Environmental Management Authority; document, monitor, and design solutions to environmental degradation.</td>
</tr>
<tr>
<td>Ecuador</td>
<td>96</td>
<td>Environmental Management Technical Assistance ($15.0 million Bank; $20.0 million total project cost)</td>
<td>Strengthen environmental institutions and review and update environmental legislation; update pollution control and standards; national environmental information system; environmental planning and management for the Ecuadorian Amazon; municipal environmental management.</td>
</tr>
<tr>
<td>Colombia</td>
<td>96</td>
<td>Urban Environmental Management ($20.0 million Bank; $40.0 million total project cost)</td>
<td>Provide technical assistance to national, regional and local institutions for improving environmental management in urban areas.</td>
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<tr>
<td>Country</td>
<td>FY</td>
<td>Project name and cost</td>
<td>Project description</td>
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<tr>
<td>Sri Lanka</td>
<td>97</td>
<td>Environmental Action I ($14.8 million Bank; $20.8 million total project cost)</td>
<td>Initial five-year phase of longer-term program to strengthen and restructure the Environment Division in the Ministry of Transport, Environment and Women’s Affairs; establish a Community Environmental Initiatives Facility to finance environmental activities at the grass-roots level within the priorities of NEAP; pilot land management component involving rehabilitation of degraded lands with community participation.</td>
</tr>
<tr>
<td>India</td>
<td>97</td>
<td>Environmental Management Technical Capacity Building Technical Assistance ($50.0 million Bank; $61.5 million total project cost)</td>
<td>Strengthen environmental research; strengthen and expand the environmental information system; establish environmental economics cell in Ministry of Environment and support environmental economics education in universities; support review and upgrading of environmental standards; design a framework for environmental indicators; strengthen the national and regional offices of the Ministry of Environment; decentralize environmental management; strengthen implementation of environmental law and of environmental monitoring and compliance; support pilot effort in Gujarat State.</td>
</tr>
<tr>
<td>Malawi</td>
<td>97</td>
<td>Environmental Management ($12.4 million Bank; $13.7 million total project cost)</td>
<td>Support institutional capacity building and strengthening of the environment information system, environmental education, community-based environmental management, and environmental actions and studies.</td>
</tr>
<tr>
<td>Zambia</td>
<td>97</td>
<td>Environmental Support Program ($12.8 million Bank; $20.8 million total project cost)</td>
<td>Set in place an effective institutional and regulatory framework for environmental protection and natural resource management; pilot community environmental management program; environmental education and public awareness; pilot environmental fund for the promotion of community-based microprojects; establishment of an environmental information network and monitoring system.</td>
</tr>
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</table>
Annex B Objectives of environmental institution-building projects, institutional components

<table>
<thead>
<tr>
<th>Country</th>
<th>Institution building/strengthening</th>
<th>Developing, strengthening national environmental management capacity</th>
<th>Developing human resources/training</th>
<th>De-centralization/local capacity</th>
<th>Developing environmental legislation/policy</th>
<th>Integration of environmental issues</th>
<th>Environmental information/data system</th>
<th>Environmental education/research</th>
<th>Studies</th>
<th>Public awareness</th>
<th>Strengthen financial mechanisms</th>
<th>Facilitate donor funds</th>
<th>Reverse environmental degradation</th>
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<tr>
<td>Brazil</td>
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<td>Sri Lanka</td>
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Notes: Key objectives for Madagascar, Sri Lanka, and Ecuador: to reverse current environmental degradation trends; promote sustainable use of natural resources. An objective for India: Monitoring and compliance.
Annex C
Institutional Components in Environmental Institution-Building Projects

Please see the following page for Annex C table
### Annex C Institutional components in environmental institution-building projects

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<tr>
<td></td>
<td>Institution strengthening</td>
<td>Training &amp; human resources development</td>
<td>Coordination</td>
<td>Strengthening of</td>
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Annex D
Supervision and Implementation Indicators for Environmental ID Projects

Please see the following page for Annex D table
## Annex D: Supervision and implementation indicators for environmental ID projects

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Annex E
Activities, Instruments, and Approaches in World Bank Environmental ID Projects

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### Activities, instruments, and approaches in the World Bank environmental institutions development projects

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#### I ENVIRONMENTAL MANAGEMENT

**DEVELOP ENVIRONMENTAL POLICIES**

1. General Environmental Policies:
   - Green Issues Policies
   - Brown Issue Policies
   - Economic Measures/Considerations

2. General Environmental Regulations/Standards
   - Brown Issues
   - Green/Natural Resource Issues Regulations
   - Participatory Approaches to Legislation/Regulation Def.

**LEGAL AND REGULATORY FRAMEWORK**

1. Environmental Strategies/Management Systems
   - Brown Issue Strategies/Management Systems
   - Green Issue Strategies/Management Systems

2. Urban Issues Strategies/Management Systems

**MONITORING**

1. General Environment Monitoring Systems
   - Green Issues Monitoring

**ENFORCEMENT**

1. General Environmental Information Systems/Networks
   - Geographic Information/Mapse/GIS
   - Brown Issues Information
   - Environmental Legal Information

**STUDIES**

1. Studies On Environmental Management Issues
   - Brown Issues Studies
   - Green Issues Studies
   - Studies Relating to Environmental Economic Issues
| Fiscal Year | 90 | 90 | 91 | 91 | 92 | 92 | 93 | 93 | 94 | 94 | 94 | 94 | 95 | 95 | 95 |
|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| **1. Incentives** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **2. Support for Project Implementation** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **3. Research on Green Environmental Issues** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **4. Improvement of Research and Management** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **5. Environmental Information/Awareness Campaign** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **6. Environmental Information/Awareness Campaign** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **7. Environmental Information/Awareness Campaign** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **8. Environmental Information/Awareness Campaign** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **9. Environmental Information/Awareness Campaign** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **10. Environmental Information/Awareness Campaign** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

**Annex E** Activities, instruments, and approaches in the World Bank environmental institutions development projects

- Brazil
- Madagascar
- Poland
- Mauritius
- Indonesia
- Mexico
- Nigeria
- Pakistan
- Bolivia
- Chile
- China
- Ghana
- Korea
- Zambia
- Morocco
- Ecuador
- Benin
- Honduras
- Russia
- Trinidad and Tobago
- Uganda
- Ecuador
- Colombia
- Sri Lanka
- India
- Madagascar
- Malawi
- Zambia
Annex E Activities, instruments, and approaches in the World Bank environmental institutions development projects

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<th>Countries/projects:</th>
<th>Brazil</th>
<th>Madagascar</th>
<th>Mexico</th>
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<th>Mozambique</th>
<th>Nigeria</th>
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**TRAINING**

(i) General Environmental Training for Environmental Agencies

(ii) Training for public awareness/research/education

(iii) Training for Environmental Information/data management/mapping

(iv) Training for Green Issues Management

(v) Training for Green Issues Management

(vi) Training for Brown Issues Management

(vii) Training for Green Issues Management

(viii) Production of training/teaching materials

(ix) Training related to environmental economic issues

**AQUISITION OF EQUIPMENT**

(i) Equipment for Offices/project management etc. for main agencies; computers, vehicles etc.

(ii) Equipment for information systems and data management

(iii) Equipment for environmental monitoring/data collection

(iv) Equipment for environmental research

**ENVIRONMENTAL LABORATORIES**

**RESEARCH CENTERS**

**EXTERNAL RESOURCE ADMINISTRATION**

**ADDITIONAL STAFF/HUMAN RESOURCES**

**Funds for Environmental Management/Projects**

**III DECENTRALIZED ENVIRONMENTAL MANAGEMENT**

**TECHNICAL ASSISTANCE**

**LEGISLATION**

**REGIONAL STRATEGIES/PLANNING**

(i) General regional strategies for environmental management/decentralization

(ii) Regional strategies for Brown Issues management

(iii) Regional strategies for Green Issues management
**Annex E** Activities, instruments, and approaches in the World Bank environmental institutions development projects

<table>
<thead>
<tr>
<th>Countries/projects</th>
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<td>21</td>
<td>15</td>
<td>17</td>
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<td>57</td>
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</tbody>
</table>

**STUDIES**

(i) Studies for strengthening environmental management

(ii) Studies of Green issues

(iii) Studies of Brown issues

**MONITORING**

**ENFORCEMENT**

**EQUIPMENT**

(i) Equipment for regional environmental agencies/management

(ii) Equipment for information/data management

(iii) Equipment for Green Issues Management

**CASE STUDY**

municipal case s. of solid waste mgt.

**INFORMATION/DATA MANAGEMENT**

**INSTITUTIONAL CAPACITY BUILDING**

(i) Establish/strengthen regional/local environmental institutions

(ii) Support for project implementation

(iii) Establish regional institutions for Green issues Management

(iv) Establish regional institutions for Brown issues Management

(v) Establish/strengthen institutions for land tenure/participation issues

**TRAINING**

(i) Training in "general" environmental management etc. for local environmental institutions

(ii) Training for Green Issues Management

(iii) Training for environmental information/education/participation

**EDUCATION/AWARENESS/PARTICIPATION**

(i) Integrated/participative approaches to strengthening local environmental management

(ii) Public awareness/education outside formal schooling

(iii) Environmental education in schools

**INVESTMENT FUND/ENV. INVESTMENT**

**GREEN/NRM ISSUES**

**BROWN ISSUES**
Bibliography


