



Evolution of the World Bank's Environmental Policy

As environmental degradation increasingly threatens economic development, the Bank intensifies its efforts to integrate environmental considerations into its day-to-day work

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In recent years, environmental degradation has become a matter of central concern for both developing and industrialized countries. The evidence is increasing that sound environmental management—far from being a luxury—is an essential ingredient for maintaining the natural resource base upon which most nations depend for their continued economic development. Developing nations will have to find a path to growth that differs markedly from the one traversed by their predecessors. And the industrialized ones will have to modify their behavior, curbing excessive use of resources and managing waste more efficiently.

The changing environmental problems of the world have, in recent years, heightened awareness of the dangers posed to all mankind. Traditionally, these problems were limited to those associated with the effects of urban and industrial waste disposal on local populations. However, critical environmental issues now include global warming (also known as the greenhouse effect), threats to the ozone layer, tropical deforestation, the transboundary movement of hazardous wastes, acid rain, soil erosion, desertification, siltation of dams, threats to indigenous peoples and species, and overuse and misuse of pesticides. Moreover, these problems even call into question the very relevance of conventional economics.

In developed and developing nations alike, governments have been increasingly investing in conservation measures (such as water-

shed protection and reforestation schemes), building ameliorative components into projects (such as pollution control equipment), strengthening environmental institutions, and introducing appropriate regulatory or legislative mechanisms. The World Bank has long stood committed to help in this regard—the first environmental advisor was recruited in 1969, establishing an Office of Environmental Affairs shortly thereafter, and numerous projects have contained environmental objectives, even if not labelled as such. But the rapidly unfolding events of the past two decades have called for a substantially greater attention to environmental matters and a more comprehensive approach than had been previously pursued by the Bank, as public discussion of these subjects has grown louder. In particular, a number of Bank lending operations, such as the Polonoeroeste project in Brazil, the Botswana Livestock project, and the Indonesia Transmigration

For a fuller discussion, see Development Committee paper number 22, "World Bank Support for the Environment: A Progress Report," 1989. Two earlier papers in this series are: "Environment and Development: Implementing the World Bank's New Policies," number 17, 1988; and "Environment, Growth, and Development," number 14, 1987. See also "Striking a Balance: The Environmental Challenge of Development," available without charge from the World Bank Publications Sales Unit, Washington, DC 20433 USA.

project, have been the subject of intense public criticism.

In 1987, in part spurred by this criticism, the Bank sharply adjusted its policies so as to favor environmental management. Underlying this change was the growing evidence and conviction that environmental degradation in its many forms constitutes a threat to economic development and growth. Utilizing the concept of "depreciation of natural capital" allows environmental deterioration to be translated into macroeconomic terms. For example, a recent study by the World Resources Institute estimates that although the GNP of Indonesia increased 7 percent a year between 1970 and 1984, the true growth rate would fall to 4 percent a year if such depreciation were allowed for.

The Bank is now convinced that the pervasive nature of environmental problems dictates a new approach: integrating environmental management into economic policymaking at all levels of government, supplementing the traditional project-by-project approach. The Bank also recognizes that special attention needs to be given to designing economic incentives in such a way that they induce environmentally sound practices, and experience shows that the two can be mutually supportive. Over the past two years, the Bank has made substantial progress on many fronts, particularly in the area of project lending. But much remains to be done, especially when it comes to country and sector work.

Country environmental studies

The Bank's new policy—making environmental issues part and parcel of the way that all staff view their work—is being implemented through a series of activities. The first step typically is a set of environmental studies, the most basic being environmental issues papers. These internal discussion documents, which have now been prepared for most active borrowing countries, identify key environmental problems and their underlying causes. They heighten Bank staff awareness of environmental issues, delineate responsibility for addressing them in the Bank's country operations, and achieve a consistent approach to their solution. Common themes are the negative effects on the environment of perverse economic incentives, insecurity in property rights, population pressures on resources, and the lack of institutional capacity to tackle major problems.

For some countries, the next conceptual step is the preparation of environmental action plans, which are undertaken by governments with broad local participation and international support. These plans cover a

Fiscal year 1989 loans with environmental elements,¹ by sector

	Total loans	Loans with environmental elements	Percent of total
Agriculture and rural development	51	39	76
Energy	23	12	52
Transportation	22	7	32
Water supply and sewerage	10	7	70
Industry	14	5	36
Industrial development finance	16	3	19
Small-scale industry	5	1	20
Urbanization	12	3	25
Telecommunications	7	0	0
Education	19	2	11
Population, health, and nutrition	12	2	17
Technical assistance	13	0	0
Nonproject	21	4	19
TOTAL	225	85	38

Source: Environment Department, World Bank.
¹Project described as having important environmental objectives, covering at least 5 percent of the project cost.

wide spectrum of activities, providing a framework for integrating environmental considerations into a nation's economic and social development program. Work on overall country plans has been completed in Madagascar, Lesotho, and Mauritius; those in Rwanda and Ghana are well advanced; and plans in Burkina Faso and Guinea are currently underway. Already the Bank is finding that these plans can be effective in helping government decisionmakers and donors set national priorities for environmental action. In addition, they help raise public awareness and can serve to strengthen policy formulation on many critical issues—for example, population, land, forest, and water management, and related fiscal matters (see article on page 9).

In the case of some larger countries, or where important and complex sectoral problems arise in a country, greater selectivity and more in-depth treatment of issues may be required. Examples of such efforts include major studies in Indonesia, Nepal, and the Philippines, all of which focus on the multiple causes of deforestation and poor watershed management. A Bank study of the underlying causes of tropical deforestation in Brazil—which built upon previous work by the Brazilian government—provides a classic example of the way in which economic analysis can be used to identify appropriate environmental policies.

In still other cases, it makes most sense to address issues at a regional level, involving a number of countries. This is especially true where a resource or resource base occupies central importance in more than one country, where actions in one country may significantly affect another due to a shared resource, or

where geographic realities necessitate the resolution of problems over a wide area. Several such regional studies are under preparation, the largest being the Environmental Program for the Mediterranean, funded jointly with the European Investment Bank. Others include the Capital Cities Clean-Up Project for the Asian Region, and a study of the role of geographic information in renewable resource management in Sub-Saharan Africa.

Integrating the results

A major challenge facing the Bank today is to integrate successfully the outcomes of these studies into its country economic and sector work, which forms the basis for Bank lending and the setting of priorities for its dialogue with governments on economic policy. A review indicates that the increasing concern with the environment is only just beginning to be reflected in country economic work. Although some papers do build the conclusions from substantial environmental work into country economic analysis, in many cases reference to the environment remains superficial. There have been relatively few efforts to trace the likely consequences of resource degradation for sustainable economic growth, or to identify feasible economic policy measures to deal with environmental problems.

The Bank's record is much better, however, in the most visible of its activities, lending operations. Last year, well over a third of the Bank's loans contained significant environmental components (see table), and there are indications that the growing concern for the environment will be even more evident in future lending operations. Nearly

30 major environmental projects are expected to be approved by the Board of the Bank over the next three-year period; these span a variety of sectors, targeting areas such as integrated watershed development, resettlement, and industrial energy conservation. Moreover, recently introduced environmental assessment procedures should help ensure that the environmental consequences of individual projects are examined at an early stage. On paper, the new procedures primarily codify existing mechanisms, but in practice, it will mean far greater local involvement in project preparation and a more systematic approach to the issue—all loans will be subject to such an assessment unless specifically exempted.

A look at the Bank's lending program in fiscal year 1989 shows a wide range of environmental issues being addressed. As usual, most agricultural and forestry loans contained environmental components such as land and soil conservation, integrated pest management techniques, wildlife management, forest protection, and rehabilitation of drainage and irrigation systems. An example is the Sri Lanka Forest Sector Development Project, which by emphasizing environmental considerations, has led to the suspension, pending environmental review, of existing plans to log more than 45,000 acres of tropical forest. Almost all energy projects contained loan conditions to improve the pricing of fuels and the efficiency of energy consumption, and more than half included environmental elements that dealt with energy conservation, air and water pollution, and problems associated with dams and resettlement. Environmental concerns were also frequently taken up in lending for other sectors—particularly industry, transportation, and water and sewerage—and are a major justification for population lending. In addition, projects financed by the International Finance Corporation, the Bank's affiliate that primarily promotes private sector development, are devoting greater attention to environmental consequences.

Structural adjustment lending has not, until recently, paid specific attention to environmental issues. But it does not follow that the consequences of this omission have necessarily been adverse. Indeed, in many cases, good economics is good for the environment: long-term economic and social objectives can often be well served by short-term adjustment policies. Nevertheless, more explicit consideration of the effects of adjustment lending on the environment is necessary not only to avoid possibly damaging environmental consequences, but also to fully use the potential of adjustment lending in improving environmental conditions.

Generalizations about the overall impact of past adjustment lending on the environment are difficult to make. Apparently, identical loan conditions may have dramatically different impacts in different countries, depending on the prevailing institutional arrangements, the prices of other goods, and the physical and cultural environment. Even so, a few tentative conclusions can be drawn. Certain types of structural reforms are likely to help the environment: these include measures aimed at reducing or gradually eliminating pesticide subsidies, reforming energy prices to reflect the economic costs of supply, improving the security of land tenure, and increasing the participation of farmers in the



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operation and maintenance of irrigation schemes. Other types of adjustment policies—for example, those trying to influence agricultural prices, and therefore the type of agricultural output, by reducing government intervention in marketing arrangements or by revaluing exchange rates—may have a profound impact on the environment, one way or the other. However, it will typically take a great deal of work to determine whether the environmental impact of such policies is beneficial or adverse.

Efforts are now being made to better anticipate the effects of adjustment policies on the environment and to design policy interventions accordingly, with the support of research, policy development, evaluation, and training programs. In addition, it may be possible in selected cases to use adjustment lending to further specific environmental objectives. Adjustment lending over the past year illustrates a growing recognition of this potential. Of the 14 structural adjustment loans approved, four explicitly address environmental objectives or issues: Gambia (agriculture and environment), Ghana (natural resource management), Guinea-Bissau (forestry), and Laos (forestry). In several other

cases, loans incorporate conditions that are likely to have positive environmental implications.

Strategic issues

In looking beyond what has been quite a substantial and rapid integration of environmental concerns into the Bank's day-to-day operations, a number of strategic issues remain to be faced. Conceptual and practical problems involved in bringing environmental management into the mainstream of economic policymaking must be resolved; the Bank's role in the special problem of the "global commons" (i.e., environmental issues that are of international significance) needs to be examined; and political constraints need to be addressed.

Valuing the environment. Difficulties of valuation can create a bias against environmental projects; in particular, standard techniques of project analysis tend to support the myopic view of decisionmakers in both government and development institutions. The economic justification of projects and policies rests on a comparison of benefits and costs, valued in monetary units. Even if the consequences of projects are predicted accurately, benefit-cost analysis has severe shortcomings, because important value judgments often have to be made concerning, for example, the long-term effects of tropical deforestation or the imminent extinction of a species. This kind of difficulty applies in evaluating the simplest of projects, but is even more pressing when complex environmental consequences are involved. In these cases, such standard valuation problems as the welfare of future generations, irreversible damage, and externalities are often exhibited to an extreme degree.

Despite the limitations of economics in placing values on many consequences of projects, rigorous benefit-cost analysis is still of critical importance. It is increasingly being recognized by the Bank, however, that traditional analysis should be supplemented by an equally rigorous appraisal of physical and distributional effects. Work is underway on guidelines for project staff that will show—for many urgent issues, such as the protection of endangered species, climate change, and deforestation—how far standard economics should be used and where it needs to be supplemented by assessing nonmonetary impacts, with explicit attention to the time dimension and uncertainty.

Economic policy and environmental management. Sound economic policies require a better understanding of the causes of environmental degradation, as well as the social and economic significance of the phenomenon. Determining causality, a necessary

step in introducing remedial measures, is difficult because of the interdisciplinary nature of environmental questions, and the complex interactions between natural events and human activities. The Bank is trying to unravel these questions by investigating the usefulness of geographic information systems, including remote sensing. The purpose is to see if recent advances in the processing of geographic information can be used to identify the impact of changes in economic and social variables—such as population growth, poverty, land tenure arrangements, and pricing of key agricultural commodities—as a basis for policy intervention.

The macroeconomic importance of environmental problems should also be emphasized. The shortcomings of national income accounts in their treatment of environment are fairly well known—for example, pollution abatement expenditures are counted as additions to national income. Of special relevance to many developing countries is that there is typically no accounting for the drawing down of the stock of those resources that, in principle, are renewable, but which in practice, because of overexploitation, are being rapidly depleted. If compensating investment is not made, growth based on such a process is not sustainable, and conventional national income measures provide a misleadingly favorable impression of economic progress. The Bank plans to conduct a series of country studies to create an awareness of environmental issues at the macroeconomic level, and equally important, to identify areas where more information is required to formulate sound policies.

Although research in these and other areas is needed, information deficiencies should not prevent action. Economic techniques exist—and for most countries, so does natural resource information—to substantially improve the way that environmental degradation is handled in economic planning. The Bank's country economic work will increasingly focus upon (1) the extent to which national income accounts would be affected if environment is accounted for properly; (2) the extent to which environmental degradation threatens sustainable economic growth and country creditworthiness; (3) the setting of priorities for environmental problems; and (4) the identification of economic policies to address environmental issues.

The global commons problem. Air and water pollution on an international scale—in the form of acid rain, global warming, threats to the ozone layer, and pollution of the seas—reflect the growing physical and economic interdependence among nations. Although certain developing countries are contributing to the problem through emission of

industrial pollutants and tropical deforestation, primary responsibility continues to rest with the developed countries. Industrialized nations, for example, with about 11 percent of the world's population, are responsible for over 90 percent of the industrial emission of carbon dioxide into the atmosphere. The Bank will continue to urge these nations to improve their environmental policies through its participation in international conferences, such as those on global warming, transboundary shipment of toxic wastes, and the ozone layer.

With its borrowing countries, the Bank confronts global commons issues in a number of ways. These include regional activities, as well as individual projects and policies whose environmental goals are consistent with global objectives. A good example is in the field of energy conservation, which because of increasing environmental threats (notably, global warming), will become still more important in the future. Efficient pricing policies that reflect economic and environmental costs of supply, energy conservation, and improved compliance with loan conditions relating to tariffs and cost recovery will continue to be central to the Bank's energy policy. Another emerging priority is the identification of opportunities for funding investments that will allow countries to develop alternatives to chlorofluorocarbons, the emission of which threatens the ozone layer and also contributes to global warming.

While the Bank can encourage borrowers to invest in environmental improvements wherever possible, its ability to persuade

borrowers is limited when the benefits accrue outside their national borders. This situation applies to measures, for example, that reduce the direct export of pollutants and to the preservation of a unique indigenous species that may be primarily of international concern. In such cases, borrowing at commercial rates may not be acceptable. Various development agencies and nongovernmental organizations are, therefore, currently considering alternative forms of subsidized funding mechanisms for environmental protection. Debt-for-nature swaps are one technique that has recently been employed for a number of countries. Although Bank funds cannot be used for this purpose, the Bank supports such efforts in principle and stands prepared to assist in facilitating arrangements between developing country governments and potential donors.

Political constraints. The broadening of the Bank's environmental strategy from a focus on individual projects to include a concern with macroeconomic causes and prescriptions represents a major change in approach. Nevertheless, even more fundamental causes of environmental problems need attention, and inevitably involve politically sensitive questions about the distribution of land, income and wealth, and political and institutional power. Environmental problems inherently involve conflicts of interest: the upstream polluter damages downstream fisheries, mining or logging operations threaten indigenous tribes, deforestation threatens the global climate, and urgent present-day needs threaten the well-being of future generations. In most cases, the powerful damage the weak, or those who have little say in the decision-making process. Strong political will is therefore required to overcome the constraints posed by vested interests. Against this background, governments, the Bank, and other external agencies no doubt will encounter increasing resistance in trying to deal with environmental concerns.

Conclusion

To promote sound environmental management, and ultimately, sustainable development, the Bank will attempt to ensure that its projects satisfy the often mutually supportive objectives of economic growth, poverty alleviation, and environmental protection. The traditional concern with the environmental consequences of individual projects will now be enhanced by more rigorous environmental assessment procedures. However, these efforts alone are not sufficient. They must be accompanied by the integration of the environment into other aspects of the Bank's activities—particularly country economic work—if real progress is to be made. ■



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