

INTRODUCTION

The Asian and Pacific region covers 23 percent of the world's land area and, together with the Indian and Pacific oceans, spans half the globe. It contains three billion people or 55 percent of the world's population. The population density of 93 persons per square kilometer compares with only 24 for the world as a whole. Close to 900 million of the world's poor—those who survive on less than \$1 per day—live in the region, indicating that one in three Asians is poor.

The rate of urbanization is unprecedented in the industrialized countries of East Asia and Southeast Asia. Today, nine out of 13 megacities, with populations exceeding 10 million, are in Asia. By 2025, the number will rise to 20. This anticipated increase represents a massive and rapid economic and demographic transformation from rural to urban societies—a transformation that will drastically change the nature and scale of humanity's impact on the environment.

The environment in the region is under siege from levels of pollution and degradation that pose a threat not only to the quality of life, but also to the region's very economic survival. Air pollution in Asia's cities is the worst in the world, its rivers are among the most polluted, and its terrestrial ecosystems are among the most degraded.

Neither urban nor rural areas are spared. In congested cities, children ingest lead from dirty smoke spewed out by vehicles, causing them to lose precious IQ points. Noise, air, and water pollution, congestion, and poor sanitary services have resulted in a high incidence of illnesses in urban areas. Asia's traffic not only contributes to air pollution; it also results in millions of dollars lost in work time. The rate of urban poverty will climb as people from the provinces continue to head for the cities. In rural areas, dependence of the poor for a living on pasture, fish, coastal resources, and forests creates undue pressure on what are already degraded resources. The resultant loss of biodiversity also means loss of economic opportunities.

Asia's economic performance could be undermined not only by environmental pollution, but also by natural resource depletion. For example, in many countries of Asia, renewable resources such as timber are being depleted faster than they are regenerated through reforestation.

Causes of Asia's Environmental Problems

Asia's environmental degradation can be traced to several causes. Some point to the fact that finite natural resources cannot support growing

populations. Others blame poverty, arguing that without access to any other source of livelihood, the poor are forced to plunder the environment. Another possible cause is economic growth since much of Asia's environmental degradation took place and accelerated during the region's rapid growth over the past 30 years.

An Asian Development Bank (ADB) study, *Emerging Asia: Changes and Challenges*,¹ contends that people prefer a clean environment to a dirty one. As they gain more disposable income and leisure time, they tend to seek out unspoiled forests and recreation sites. Thus, potential demand exists for clean air and water, and natural recreation areas such as national parks. Environmental degradation, however, means that this demand is not being met and this is due in large part to institutional, policy, and market failures.



Markets fail to price resources for which there are no secure property rights. Even where property rights exist, the prices of goods often fail to reflect the environmental cost of their production.

A major policy and institutional failure is that the private sector has been largely excluded from providing environmental services. As in many other parts of the world, services such as water supply and sanitation, solid waste collection, watershed protection, biodiversity conservation, and wastewater treatment are government concerns.

Although people want a better environment and are often prepared to pay for it, governments have been slow to respond. This is primarily due to a shortage of capital. Some governments have been unwilling to charge users the full or even a reasonable portion of the cost of environmental services, and others that did charge users channeled funds to purposes other than environ-

mental cleanup. As a result, environmental services are often inadequate in quantity and quality. Where the region's governments have implemented environmental policies, they have tended to be inappropriate. Too often they have simply adopted unsuitable policies from developed countries and implemented them inadequately.

Costs of Environmental Degradation in Asia

Environmental degradation has economic as well as noneconomic costs. These costs manifest in several forms: adverse impacts on human health, loss of productivity, and lower overall well-being. In Asia, estimates of economic costs of environmental degradation range from 1 to 9 percent of a country's gross national product (GNP), depending on the country and the impacts included in the estimates.² Noneconomic costs that affect welfare, but not GNP, are even larger, but are often difficult to value.

Studies in the region have indicated partial estimates of the economic costs of environmental degradation in selected economies at different times.

- In the People's Republic of China (PRC), for example, Smil (1996) estimated that productivity losses caused by soil erosion, deforestation, and land degradation; water shortage; and destruction of wetlands have amounted to between \$13.9 billion and \$26.6 billion, equivalent to 3.8-7.3 percent of its 1990 GNP.
- In Jakarta, Indonesia, studies by Ostro (1994) and DeShazo (1996) estimated the annual cost to have reached \$2.16 million (equivalent to 2 percent of GNP) from the health effects of particulates and lead that have exceeded levels of World Health Organization (WHO) standards.
- A study by O'Connor (1994) on the effects of the same pollutants in Thailand revealed an annual loss of \$1.6 billion, representing 2 percent of GNP.
- In Pakistan, the health impacts of air and water pollution and productivity losses from deforestation and soil erosion were estimated at \$1.71 billion, or 3.3 percent of GNP, in the early 1990s.
- The result of a 1993 World Bank study in the Philippines showed that health and productivity losses from water and air pollution around Manila in the early 1990s amounted to between \$335 million and \$410 million, or 0.8 to 1 percent of GNP.

INTRODUCTION NOTES

¹ *Emerging Asia: Changes and Challenges*, Asian Development Bank, 1997.

² *Ibid.*

RECENT ACHIEVEMENTS

Since the early 1980s, ADB has been at the forefront in assisting developing countries in the Asian and Pacific region to address their environmental problems. The following section outlines ADB's recent achievements in the environment field, particularly in mainstreaming the environment into its operations, building environmental capacity in the region, forging links with other organizations, and promoting environmental awareness within and outside ADB.³

PART I



MAINSTREAMING ENVIRONMENT INTO ADB OPERATIONS

It is ADB's policy to promote environmentally sound development. In doing so, it ensures early on in the project cycle that the projects and programs it finances are environmentally sound. This is accomplished through the mainstreaming of environmental considerations into the various stages of the project cycle and into other relevant ADB operations.

Mainstreaming of environment into relevant ADB operations started in the late 1980s and was further enhanced in the mid-1990s when environmental protection was included as one of ADB's five strategic development objectives.⁴ Environmental priorities are now mainstreamed into country operational strategies (COSs), country assistance plans (CAPs), sector and other policies, and investment projects and programs.

At the planning stage, ADB ensures that environmental considerations are properly mainstreamed into the COS. Environmental inputs for the COS are usually based on a country environment profile prepared by ADB in consultation with the government of the relevant developing member country (DMC). ADB's COS underpins its strategic operations in the country during a three-year period.

The resulting mix of projects is included in the CAP and screened for environmental impacts. Where adverse impacts could not be avoided, these are properly mitigated or compensated to acceptable levels. ADB also adopts a proactive role in designing loan projects that are environmentally beneficial.

At the center of ADB's environmental requirements and review procedures is the environmental assessment (EA) process. EA is a critical element of project planning in ADB, and is integrated with the assessment of technical, financial, economic, and institutional aspects of projects. ADB requires an EA for all of its environmentally-sensitive public and private sector lending operations with investment components, including sector investment projects. It also requires an EA for the investment component of program loans, and subprojects financed through financial intermediaries. Strategic environmental assessment (SEA) is required for policy-based loans such as sector loans, program loans, and sector development programs.

Environmental priorities are now mainstreamed into country operational strategies, country assistance plans, sector and cross-cutting policies, and investment projects and programs.

ADB’s environmental review process starts with screening at identification stage and passes through the appraisal, implementation, and evaluation stages. All ADB loans are reviewed for their potential environmental impacts. Borrowers’ compliance with ADB environmental requirements, complemented by the review process, helps to ensure early identification of environmental issues. It also allows for the inclusion of environmental enhancement measures in project design. ADB undertakes compliance monitoring particularly for environmentally-sensitive projects during project implementation.

Recognizing that the quality of governance—policies and institutional capacities—is essential to sustained development, ADB supports the environmental capacity building efforts of the governments of its DMCs. It also promotes projects and programs designed to protect, rehabilitate, and enhance the environment and quality of life in its DMCs. It trains staff and DMC counterparts, and disseminates information for guidance in environmental aspects of economic development.

ADB promotes projects and programs designed to protect, rehabilitate, and enhance the environment and quality of life in its DMCs.

ADB promotes subregional cooperation, and leverages co/parallel financing from the Global Environment Facility (GEF) in the areas of climate change, biodiversity conservation, and protection of international waters (see Part IV). It also assists countries in Northeast Asia in addressing the issue of acid rain. Likewise, it plays a key role among affected Southeast Asian countries and other donors in finding preventive solutions to the forest fire problem. In the Greater Mekong subregion (GMS), ADB continues to assist by laying the institutional and policy framework for effective management of the environment and the shared natural resources in the subregion.

Integrating Environment in Sectoral and Cross-cutting Policies

The integration of environmental considerations into various ADB sectoral and cross-cutting policies effectively guides ADB operations. Guiding policies include those on *Indigenous Peoples, Involuntary Resettlement, Regional Cooperation, and Confidentiality and Disclosure of Information*. These contribute toward the strengthening of ADB’s EA procedures, particularly institutionalizing SEAs in

AT A GLANCE

Major Programs

- Integrating environment into sectoral and cross-cutting policies.
- Integrating environment into investment projects and programs:
 - abating and mitigating impacts; and
 - direct targeting of environmental interventions.
- Building environmental capacity.

relevant ADB operations, as well as promotion of SEAs in DMCs' decision-making processes.

In strengthening the implementation of environmental protection measures identified in the course of preparation of ADB's loan projects, ADB staff are guided by the policy on *Indigenous Peoples and Involuntary Resettlement*.

In the enhancement of environmental protection measures, particularly the conservation of resources for the livelihood of the poor, several policies guide ADB in dealing with the following classes of environmental problems:

- conservation of the ecological base of rural livelihood, including biodiversity resources: *Forestry, Fisheries, Population, Water Resources, Energy, Poverty Reduction*;
- protection of freshwater, coastal, and marine resources: *Water Resources, Fisheries, Poverty Reduction*;
- preventing desertification and soil degradation: *Water Resources, Forestry, Population, Gender and Development*; and
- reducing local air, water, and soil pollution that directly impacts on the livelihood and health of the poor, including pollution from small and medium enterprises (SMEs) and urban transport: *Energy, Water Resources, Health, Gender and Development, Poverty Reduction*.

Integrating Environment in Investment Projects and Programs

Since the mid-1980s, integrating environmental considerations into investment projects and programs in ADB has evolved and expanded from impact abatement and mitigation—using the EA process—to impact prevention and environmental enhancement, investing directly in projects for environmental improvement.

Abating and Mitigating Impacts

ADB ensures that the environmental impacts of projects and programs are reviewed, and that prevention, abatement, and mitigation measures are incorporated into project and program designs. All projects are screened for their potential environmental impacts.

Category A projects, defined as environmentally-sensitive projects, have constituted an average of 12 percent of the total number of projects in the last three years. In the same period, category B, defined as projects having adverse environmental impacts but of lesser degree and/or significance than category A projects, averaged about 50 percent; while category C, defined as projects unlikely to have adverse environmental impacts, averaged about



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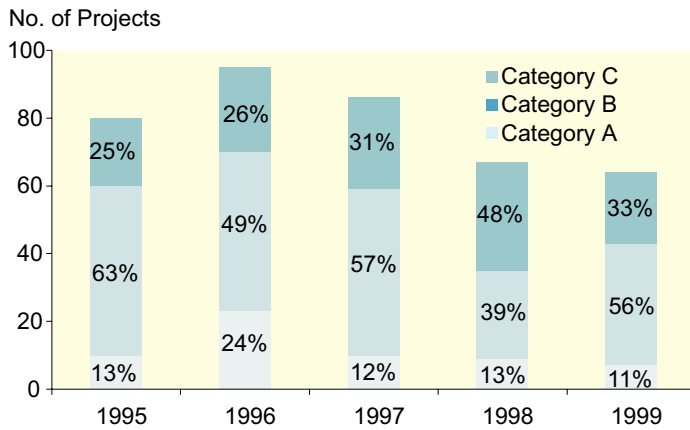


FIGURE 1:
Distribution of Projects
by Environment
Category, 1995-1999

38 percent of the total number of projects (see Figure 1).

Stakeholders' participation is encouraged in the preparation of EA reports, implementation of environmental management measures, and project compliance monitoring. Stakeholders and other interested parties are given a final opportunity to convey their comments or suggestions. Summary environmental impact assessment (EIA) reports of category A projects and summary initial environmental examination (IEE) reports of

selected category B projects are circulated for review by stakeholders and members of the ADB Board of Directors 120 days before the Board considers or approves a project. Comments or suggestions received are prepared by ADB staff by liaising with the government agency and consultants involved.

ADB's 1986 environmental guidelines are being updated and are due to be completed in 2000. Also, a peer review process to improve the quality of EIA reports has been initiated with the involvement of Environment Network members, a pool of ADB staff with expertise in various environment fields. Furthermore, ADB has conducted a study to evaluate the effectiveness of SEAs in dealing with the environmental impacts of policies and programs.

Moreover, considering the increasing mix of policy-based lending in the pipeline, studies have been commissioned to identify sector policy reforms that will have a positive impact on the environment and natural resource use in the countries. For example, the recently initiated *Asian Environment Outlook* study⁵ will highlight sector policy issues that are seen as impeding effective environmental or natural resource management programs (see box on facing page).

FIGURE 2:
Distribution of Projects by
Strategic
Development
Objectives,
1995-1999

Direct Targeting of Environmental Interventions

When environmental protection was included in 1994 among the five strategic development objectives of ADB, an ambitious 60:40 lending target for public sector loans for economic growth and environmental/social projects, respectively, was also instituted. On a three-year rolling country program, ADB has met this target, as shown in Figure 2.

Environment-oriented projects started to appear in ADB's pipeline of investment projects in 1991. In the period 1991-1999, ADB provided \$7 billion for projects with environmental objectives. Average annual

PROJECT FOCUS

Asian Environment Outlook—2001

The first *Asian Environment Outlook—2001* (AEO) is scheduled for publication in November 2000. It will review economic development policies that could provide a sound basis for improvement of environmental performance and reduction of poverty in Asia. It is expected that AEO will become a sequential triannual publication of ADB in the future.

AEO will aim to show the real development sector policies (other than environment) that have significant environmental consequences/benefits. ADB officials and development decision-makers, and planning and environmental executives of DMC governments can use the information presented in the AEO series as a basis for the formulation of environmentally-sound development policies and programs. It will present a prescriptive analysis of the kinds of interventions ADB can make in its policy-based and project loans, technical assistance, and policy dialogues to impact environmental quality and, in turn, enhance poverty reduction measures.

lending volume was about \$730 million, representing an average of 13 percent of its total annual public sector lending volume (see Figure 3).

Projects classified as having a primary⁶ or secondary⁷ environmental objective come from different sectors and have different objectives, as described in the following examples.

- *Agriculture and natural resource sector projects* involved biodiversity conservation, coastal resource management, stabilization of shifting cultivation, irrigation, watershed management, integrated pest management, coastal greenbelt conservation, and marine culture and natural resource management.
- *Social infrastructure sector projects* involved urban environmental improvement, wastewater management and pollution control, water supply, sanitation, sewerage construction, drainage improvements, and others.
- *Industry and nonfuel minerals sector projects* included the use of clean technologies and processes in manufacturing firms.
- *Transport sector projects* included two port projects that addressed sanitation and related needs.
- *Energy sector projects* with environmental objectives involved renewable energy and industrial energy efficiency.
- Projects defined as *environmental projects per se* included air quality improvement, general environmental improvement, institutional capacity building, and flood mitigation.

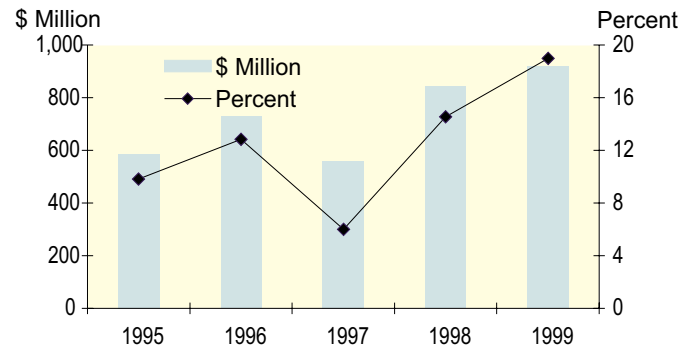


FIGURE 3:
Lending for Projects with Environmental Objectives and as Percentage of Total Public Sector Lending, 1995-1999

Projects approved from 1995 to 1999 generally fall into either the green or brown project types. Green projects involve natural resource and rural environmental management, brown projects involve pollution and urban environmental management. There is a third category of red projects involving institutional and policy reform, but only a small percentage of the loan projects has been of this type.

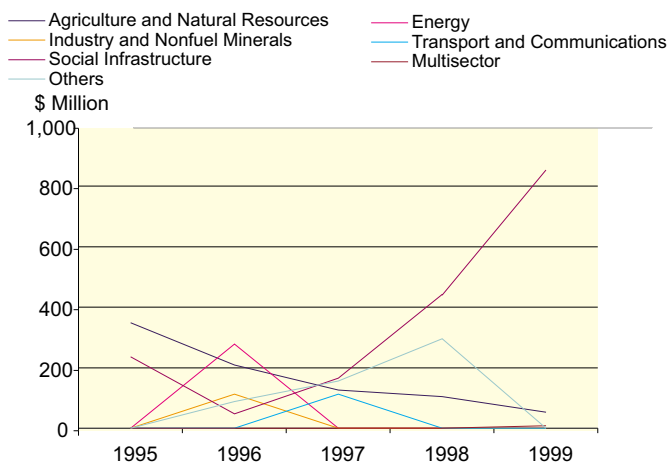
With regard to sector distribution of these loans, nearly half of the total lending volume for environmental projects was intended for the social infrastructure sector (48 percent). This was followed by the agriculture and natural resource sector (23 percent), environmental projects per se (15 percent), and energy sector (8 percent) (see Figure 4).

FIGURE 4:
Lending for Projects with Environmental Objectives by Sector, 1995-1999

In terms of the annual lending trend from 1995 to 1999, lending volume for projects in the agriculture and natural resource sector has been decreasing while that in the social infrastructure sector has been increasing. The lending volume for environmental projects per se shows an upward trend from 1996 to 1998, reaching a peak of almost \$300 million (see Figure 5).

FIGURE 5:
Trend in Lending for Environmental Projects, 1995-1999

From 1995 to 1999, the PRC was the biggest borrower for projects with environmental objectives (\$1.1 billion or 30 percent of the total \$3.7 billion). Next was India with a loan amount reaching \$840 million or 23 percent of the total. The Philippines was third with \$330 million (9 percent), followed by Pakistan (7 percent), Indonesia (6.5 percent), and Thailand and Viet Nam (6.3 percent each).



An Environmental and Social Monitoring Information System or ESMIS accessible online by all staff describes the major environmental issues and mitigation measures recommended for projects considered for ADB financing. ESMIS also monitors the status of compliance by the project proponents with environmental loan covenants and other agreed-upon environmental programs.



BUILDING ENVIRONMENTAL CAPACITY

The capacity of its people and the capacity of its institutions determine the ability of a country to achieve sustainable development. Complementing these two essential elements are policy, planning, economic instruments, management tools, legislation, and enforcement. To ensure success, environmental capacity building needs to adopt not only a cross-sectoral approach but also a wholly integrated and holistic approach to sustainable development.

Environmental capacity building is a newly emerging discipline that ensures integrated and efficient environmental and developmental management, planning and policy formulation, legislative and institutional reforms, and human resource development.

ADB can boast of an impressive record in environmental capacity building. To date, it has extended 317 technical assistance grants in this area, amounting to \$204 million in 35 DMCs. In promoting environmental capacity building in its DMCs, two subject areas—environmental management and institutional strengthening—continued to receive priority assistance from ADB while assistance to other subject areas such as human resource development, legislation, planning, and policy has lagged behind.

During the last five years, 137 technical assistance projects totaling \$112 million have been granted (see Annex 2). This amount is significantly higher than that extended for environmental capacity building during the 10-year period 1985-1994. Of the projects, 110 were country-specific while 27 were regional in scope. Their distribution is summarized in the box below.

Environmental capacity building needs to adopt not only a cross-sectoral approach but also a wholly integrated and holistic approach to sustainable development.

AT A GLANCE
ADB Technical Assistance Grants to Build Environmental Capacity, 1995-1999
Number of technical assistance projects: 137
Amount extended: \$112 million
How it was split: PRC (24 percent), Pakistan (14 percent), and Viet Nam (9 percent)
A group of DMCs including Bangladesh, Cambodia, India, Indonesia, Lao People's Democratic Republic, Nepal, Philippines, Sri Lanka, and Thailand received 24 percent (with each country receiving an average of 3 percent each).
Other DMCs (Kazakhstan, Kyrgyz Republic, Malaysia, Marshall Islands, Mongolia, and Uzbekistan) each received 1 percent.

Capacity-building Categories

Capacity building can be categorized into six activities: management, institutions, human resources, policy, planning, and legislation.

Management: Technical assistance grants to improve natural resource and environmental management took the biggest share (\$78 million or 70 percent of the \$112 million). Topics in this subject area covered a wide range of natural resource and environmental management concerns. The number of technical assistance grants focusing on EIA significantly decreased, contrasting with the marked increase in grants for natural resource management. ADB technical assistance grants focusing on environmental management paved the way for the transfer of environmentally sound technology, assisted its DMCs in standard setting, introduced assessment and monitoring, and trained a large number of DMC staff (see box on page 16).

Institutions: Next to management, in terms of volume of technical assistance grants, comes institutional development and strengthening (\$17 million or 15 percent of \$112 million). Technical assistance grants were directed towards strengthening of environmental units or institutions (see box on facing page).

Human Resources: Third in rank in terms of technical assistance grant amount is the field of human resource development. Although technical assistance projects classified under this area amount to only \$8 million (7 percent of the \$112 million), most if not all of the 137 technical assistance grants included some training and skills development or strengthening. Training activities focused on environmental monitoring and management; environmental planning; EIA; environmental law; implementation of the Kyoto Protocol and Clean Development Mechanism (CDM); transboundary atmospheric haze pollution; energy, soil and water conservation; and wastewater treatment (see box on page 16).

Policy: Out of the \$112 million, only 4 percent or \$4.5 million was directed towards developing or reforming DMC policies that impinge on environmental and natural resource management. ADB's technical assistance grants in this subject area have sought to strengthen or develop land use and land tenure policies, and promote cleaner production policies, various sector development policies that are environment-related, and forestry policies.

Planning: This subject has been one of the most neglected areas in environmental capacity building. Of the total grant amount, only a little more than \$2 million, representing 2 percent of the \$112 million, was directed towards planning. Planning has three vital areas—strategic, physical, and regional—and is critical to environmental capacity building. Among the three areas, ADB's record in terms of technical assistance for physical planning such as urban development planning, transport planning, and industrial zoning needs improvement (see box on page 16).

AT A GLANCE**Selected Technical Assistance Projects to Improve Institutions, 1995-1999****1995**

- \$1 million to provide an up-to-date environmental monitoring and information system to boost resource allocation and environmental management decisions affecting the GMS countries.

1996

- \$1.67 million to assist governments to improve their capacities to formulate and implement environmental policies, legislation, and programs of common significance to GMS countries.
- \$441,000 to review, modify, and test environmental quality indicators in selected projects in order to improve the measurement of environmental quality of development impacts.
- \$598,000 for environmental capacity building in environmental economics of six DMCs—Bangladesh, PRC, Indonesia, Pakistan, Philippines, and Sri Lanka—through workshops, courses, and on-the-job training for officials of those countries.

1998

- \$1.6 million to formulate a strategic environmental framework for the GMS.

1999

- A follow-up to the 1995 GMS technical assistance focused on the establishment of an environmental monitoring and information system in the GMS countries.
- \$215,000 to help establish sound policies, strategies, and plans for the strengthening of live reef fish trade management in Pacific DMCs.
- \$500,000 to assist DMCs in strengthening their capacities for collection of environment statistics.

Legislation: This category includes constitutional provision framework law, laws at national or sector levels, and provincial and local legislation on all aspects of sustainable development, as well as all subsidiary legislation and administrative law. From the total of \$112 million granted by ADB during the period 1995 to 1999 for environmental capacity building, only 2 percent, or about \$2.25 million, was directed towards legislation. ADB legislative assistance during this period covered six technical assistance projects aimed primarily at strengthening environmental standards and enforcement policies, developing a pesticides regulatory framework, and formulating provincial legislation on environmental protection and natural resource conservation.

AT A GLANCE

Selected Technical Assistance Projects to Train DMC Staff, 1995-1999

Training of DMC staff has been carried out through a number of technical assistance projects aimed at building human resource capacity in various areas such as policy, planning, legislation, and management.

1995

- \$600,000 to establish a regionally-focused program to strengthen the teaching of environmental law.

1998

- Recipient DMCs of capacity-building projects included Bhutan, Cambodia, PRC, India, Kyrgyz Republic, Lao PDR, Nepal, Philippines, Sri Lanka, Thailand, Uzbekistan, and Viet Nam. DMC staff capability was strengthened in various fields, foremost of which are: EIA, environmental law, environmental monitoring and management, watershed management, environmental standards evaluation, cleaner production strategies, enforcement policies, industrial pollution assessment, urban environmental management, environmental management curriculum development, market-based instruments for environmental management, and hazardous waste management.
- \$40,000 to improve the quality of environmental journalism and boost skills of selected environmental journalists in print media from all over Southeast Asia.
- \$5.6 million to develop environmentally sustainable farming systems, policies, management, and technologies through five independent research studies.
- \$75,000 for a training course to develop the skills of selected officers involved in the operation of solid waste management institutions. The regional training course was prepared for representatives from Bangladesh, PRC, Indonesia, Nepal, Philippines, Sri Lanka, Thailand, and Viet Nam, countries that have continued problems dealing with solid waste management.

ADB Assistance to DMCs to Improve Environmental Planning and Management, 1999

- Building staff and institutional capacity for decentralizing EIAs in Indonesia.
- Preparing a project in Tianjin, PRC, for wastewater treatment and water resource protection, and building capacity in ministerial status responsibilities in the State Environmental Protection Administration.
- Preparing a community-based forest resource management project in the Philippines.
- Approving two technical assistance projects in Sri Lanka, one in sustainable natural resource management for development and another to prepare a protected area management and wildlife conservation project.
- Conducting a study on the policy and institutional framework for forest resource management in Viet Nam.
- Assisting India, Indonesia, Philippines, Thailand, and Viet Nam in developing a policy and institutional framework for integrating cleaner production principles as a priority element in national environmental and industrial development strategies.

FORGING LINKS WITH OTHER ORGANIZATIONS


From 1995 to 1999, ADB strengthened its links with other organizations by hosting consultative meetings and participating in a number of regional meetings and seminars, interagency meetings, and conferences. The purpose was to exchange views, present new findings, and learn from the experiences of other development organizations on matters that are relevant to the promotion of ADB's environment program in the region.

ADB hosted the first regional consultative meeting to discuss the role of regional institutions in catalyzing sustainable development. It also hosted the first regional workshop on strengthening the Association of Southeast Asian Nations' (ASEAN) capacity to prevent and mitigate transboundary atmospheric pollution. Within the region, ADB participated in the Eighth Asia-Pacific Seminar on Climate Change and in the 5th Policy Advisory Group Meeting of the Asia-Pacific Environment and Natural Resource Information Network.

It took part in several other meetings convened in Indonesia, Malaysia, and Viet Nam by the ASEAN Senior Officials on Environment Technical Task Force on Haze intended to address the forest fire problem in Indonesia and forestall future ones in the region. ADB also participated in the Fourth Greater Mekong Subregion Working Group Meeting on Environment in Viet Nam.

ADB has participated in several consultation meetings and symposia in Japan to share its knowledge and exchange experiences with other participants. These included the Expert Workshop on Responses to Climate Change in Northeast Asia, ECO ASIA '98, the Workshop on Strategic Research on Global Environment, the Asia Pacific Economic Cooperation Symposium on Environmental Education Towards Sustainable Cities, and consultation meetings with Japanese nongovernment organizations (NGOs).

In 1998, concerned with the sustainable development of megacities, ADB, through a regional technical assistance, enabled mayors of selected megacities in its DMCs to participate in the Mayors' Asia-Pacific Environmental Summit. This provided them with the opportunity to present their policies, programs, and experiences related to the sustainable development of megacities in ADB's DMCs.



ADB hosted the first regional workshop on strengthening ASEAN's capacity to prevent and mitigate transboundary atmospheric pollution.

AT A GLANCE

ADB's Links with Some Development Organizations

With Economic and Social Commission for Asia and the Pacific and the United Nations Environment Programme, cohosted the Ministerial Level Conference on Environment and prepared the *State of the Environment in Asia and the Pacific*.

With the United Nations Development Programme, administered the largest regional technical assistance in ADB, a Study of a Least-cost Greenhouse Gas Abatement Strategy for Asia.

With the Association of Southeast Asian Nations, addressed the forest fire and haze issue that hit Indonesia and devised strategies to forestall future ones.

With United States-Asia Environmental Partnership and Asian Productivity Organization, promoted cleaner production policies and practices in the region.

At the global level, ADB participated in the Consultative Meeting among Regional Institutions on Sustainable Development in New York; the GEF Assembly in New Delhi; the GEF Council Meeting in Washington, DC; and in the United Nations Framework Convention on Climate Change, Fourth Meeting of the Conference of the Parties (COP-4) in Buenos Aires, Argentina. ADB also holds meetings with multilateral development banks (MDBs) such as the World Bank, the Inter-American Development Bank, the African Development Bank, and other institutions. The meetings have provided an opportunity to exchange views on environmental policies and to discuss recent developments in enhancing environmentally-sustainable development and donor coordination.

In addition, a technical assistance grant of \$600,000 was approved in 1999 to promote environmentally sound policies and practices, and country specific goals by supporting the United Nations Economic and Social Commission for Asia and the Pacific's (UN/ESCAP) Fourth Ministerial Conference on Environment and Development, as well as the publication of various reports. Also, a grant of \$150,000 for the Third ADB-NGO Consultative Meeting on Environment and Sustainable Development aims to establish an institutionalized framework for consultation with environmental NGOs on environmental protection, sustainable development, and poverty reduction.

PROMOTING ENVIRONMENTAL AWARENESS

Making information accessible to staff concerned within and outside ADB about its environment program, new initiatives, and responses to emerging environmental issues is critical to achieving a participatory approach in program formulation. These are promoted through various means.

A web site dedicated to the environment and social program of ADB will promote information sharing within ADB and eventually outside ADB. In addition, information is disseminated to ADB staff and DMC officials through publications prepared by the Environment Division and other departments. Staff also gain new insights by attending ADB-sponsored conferences and workshops. Within ADB, additional means of sharing information are through environment networking, and the holding of informal group discussion meetings.

From 1995 to 1999, ADB issued several publications (see Annex 3). They covered various topics such as the environmental problems in Asia, their causes, costs, and challenges; climate change; biodiversity; coastal and marine environmental management; the measurement of environmental quality; environmental statistics; review of environmental legislation; the use of market-based instruments (MBIs); EIA for developing countries; environment and economics; and environment and program loans.

Several publications are also under preparation. One is the *Environmental Assessment Guidelines*, intended to replace the environmental guidelines prepared in 1986. The other one, *Asian Environment Outlook*, described on page 11, will provide meaningful inputs in policy dialogues with its DMCs.

Knowledge Networking

Knowledge networking on environment was initiated in 1998 in ADB to help promote the exchange of information or services among staff with expertise or interest in environment. The goal of environment networking is to improve the quality of ADB's environmental products and services. A data base, now holding 80 profiles of ADB staff with environmental expertise and experiences, supports the activities of the Environment Network.

To improve staff awareness on various environmental issues encountered in ADB operations, training programs for staff are regularly conducted. Members of the Board of Directors also receive briefings on ADB's environmental operations. Likewise, a special training program was designed for mission leaders and project implementation officers on critical issues in



If ADB is to achieve a participatory approach in program formulation, it is critical to make information about its environment program, new initiatives, and responses to the emerging environmental issues accessible to staff concerned within and people outside ADB.

environmental analysis and implementation, and a training session on environmental economic analysis was also undertaken. Staff also received training on emerging environmental policy instruments for environmental management.

In ADB, informal training sessions such as greenbag sessions and environment forums are regularly held and lately average 18 per year. ADB staff, usually Environment Network members, make the presentations. Alternatively, ADB consultants or visiting experts present findings that are of operational relevance to ADB.

PART I NOTES

³ ADB's earlier accomplishments are described in *The Environment Program; Past, Present, Future*, Asian Development Bank, April 1994.

⁴ The other development objectives are: promoting economic growth, reducing poverty, supporting human development (including population planning), and improving the status of women.

⁵ RETA 5826, *Asian Environment Outlook*, for \$900,000, approved on 28 December 1998.

⁶ A project is classified as having a primary environmental objective if it aims primarily to promote sound management of natural resources and the environment through one or more of the following: protection or improvement of the local, regional, and/or global environment; conservation of or increasing the net stock of natural resources (excluding minerals); strengthening of environmental policies and institutions, and promotion of environmental education; and if one or more components for sound management of natural resources and/or the environment account for more than 50 percent of the total project cost.

⁷ A project is classified as having a secondary environmental objective if a secondary objective of the project aims to promote sound management of natural resources and the environment through one or more of the following: protection or improvement of the local, regional, and/or global environment; conservation of or increasing the net stock of natural resources (excluding minerals); strengthening of environmental policies and institutions, and promotion of environmental education; and if one or more components for sound management of natural resources and/or the environment account for at least 20 percent of total project cost.

NEW DIRECTIONS

In response to new and emerging directions in its overall operation, ADB has recently embarked on a reformulation of its environment program. In particular, the adoption of poverty reduction as ADB's overarching objective in November 1999 offers challenges and opportunities for ADB to adjust the focus of its assistance in sustainable management of environmental resources to improve the plight of Asia's rural and urban poor.

There are other internal challenges. ADB's increased attention to policy interventions, the broader environmental implications of economic development, compliance with environmental protection measures when carrying out major projects, and regional and global considerations (such as climate change and biodiversity conservation) require that ADB continue to streamline its business practices to provide the highest quality assurance possible in its products and services.



COMBATING POVERTY

As an institution whose purpose is the economic development of the Asian and Pacific region, ADB has always been concerned with poverty reduction. Beginning with a focus on economic growth, ADB has progressively expanded its approach to encompass a wide range of social and environmental concerns. But as development continues to bypass many people in the region, a new focus is called for. These considerations led ADB in November 1999 to announce that poverty reduction would be its principal aim. The key elements of this strategy are described in the box below.

To support ADB's new objective of poverty reduction, there will be a complementary reshaping of the environment program.

AT A GLANCE	
Key Elements of ADB's Framework for Poverty Reduction	
<ul style="list-style-type: none"> • Pro-poor, sustainable economic growth. • Social development: <ul style="list-style-type: none"> - human capital development; - population policy; - social capital development; - gender and development; and - social protection. • Good governance. 	

To support this new focus, there will be a complementary shift in the environment program of ADB. Environmental stability is critical to sustainable development, and as a consequence, to the objectives of poverty reduction. The poverty-environment nexus has, essentially, two broad components.

- the brown issues, which involve polluting industries that locate in areas populated by the poor on account of lax regulation and enforcement. Also included in this category is the air and water pollution that occurs in megacities, where the poor live in the worst affected localities; and

- the green issues of deforestation, rapid depletion of natural resources, and land degradation. Although powerful vested interests have caused great damage in the past, the pressures of poverty and population compound the threat through deforestation, overgrazing, and overfishing.

To address these issues, it is important to empower the poor and to give them a stake in the management of the environment and natural resources. In support of the poverty reduction strategy, ADB's environmental strategies are as follows:

- (i) to promote the sustainable management of natural resources and improve access of the poor to these resources;
- (ii) to reduce if not eliminate the risks of environmental degradation to poor communities;
- (iii) to improve environmental quality to enhance the socio-economic well-being of poor communities;
- (iv) to improve poor communities' environmental awareness and encourage them to actively participate in conserving natural resources; and
- (v) to address the environmental concerns of poor communities and explore their knowledge for improving the management of natural resources and the environment.

Poverty Strategy

The environment program supports the poverty reduction strategy, focusing on enhancement of environmental protection measures to conserve resources for the livelihoods of the poor. This includes conservation of the ecological base of rural livelihoods, including biodiversity resources; protection of coastal and marine natural resources; preventing desertification and soil degradation; and reducing local air, water, and soil pollution that directly impact the livelihoods and health of the poor.

Starting in 2000, the poverty strategy requires the preparation of a poverty analysis for all countries. Poverty analyses will guide the preparation of ADB's COSs, determining priorities and the sequence of interventions that promise the greatest impacts on poverty, thus reducing it in the short, medium, and long term. The strategic choices that evolve from poverty analysis form the basis for the partnership agreement that will be signed by ADB and the governments concerned.

The role of environmental quality improvement in poverty reduction will be considered in the preparation of the poverty analysis. Geographic and environmental characteristics will be analyzed, providing details on areas with high poverty incidence, the state of the natural resource base, the presence of environmental threats to the poor, or conflicts between the needs of the poor and environmental concerns.

AT A GLANCE

Selected Environmental Projects with Poverty Reduction Objectives, 1995-1999

Over the past five years, even before ADB adopted poverty reduction as its overarching objective, several projects had been designed with the twin objectives of environmental protection and poverty reduction.

1995

Sulawesi Rainfed Agriculture Development, Indonesia (\$30.4 million project loan), is directly benefiting about 50,000 households scattered over 235 villages and representing about 10 percent of the total population. The Project has increased the productivity and farm incomes of rainfed farmers; protected and improved the fragile environment; created employment in the rural areas; reduced poverty; and improved the socioeconomic condition of women beneficiaries.

1997

The Philippines received a \$35.2 million loan for fisheries resource management, aiming to reverse the trend of fisheries resources depletion in municipal waters. It will achieve this objective by implementing three components: (i) fisheries data management, and coastal resource management and planning; (ii) income diversification; and (iii) capacity building for relevant public agencies. By controlling destructive fishing, reducing overfishing, and rehabilitating fish habitats, the Project will benefit municipal fisherfolk in about 100 municipalities in 18 of the country's 26 priority bays.

1999

A \$70 million loan to Viet Nam will support the Government's urban development priorities. This will improve living conditions of project-affected people and upgrade infrastructure to help maintain economic growth, reduce poverty, and enhance overall environmental conditions within Ho Chi Minh City (see Viet Nam section in Part III).

In the PRC, two projects with primary environmental objectives were approved. These were a rehabilitation project for Suzhou Creek to improve water quality and flood control (see box in the PRC section in Part III); and in Shanxi Province, a loan to help solve air pollution problems in Taiyuan, Datong, and Yangquan cities through sustainable environmental management, energy efficiency, and continued progress toward market-based energy pricing.

Environment specialists provide substantive inputs in the course of working on the poverty analysis. This involvement continues through country programming missions until the preparation and finalization of country assistance programs. This ensures that environmental strategies outlined in the COS will underpin programs of policy reform, investment projects, and capacity building related to environmental improvement and/or poverty reduction in individual countries.

New Challenges and Opportunities

Support—through grants for capacity building, and project and policy-based lending—will increasingly address the critical issue of sustainable resource management. It will promote the conservation of the ecological base of rural livelihoods, including biodiversity resources; protect coastal and marine natural resources; and prevent desertification and soil degradation.

This will entail special emphasis on the rights (and responsibilities) of indigenous peoples and traditional users. In turn, this may require support for tenurial rights and traditions, and for moving from government control to co-management by government and the people who depend on the resources. ADB will also assist governments of DMCs to reduce local air, water, and soil pollution, which directly impact the livelihoods and health of the poor.

Achieving the twin objectives of poverty reduction and environmental protection requires work on a larger scale. Both should be integrated with national development strategies, sector development policies, and regional and local master plans for effective resource management.

ADB will give more attention to state, local, and municipal governance where economic, demographic, and environmental planning needs to occur, where disputes over resource rights will be resolved, and where enough local action can make a difference.

EXPANDING ENVIRONMENTAL POLICY INTEGRATION

ADB experience of working with its DMCs over the last 15 years shows that they continue to face challenges in implementing environmental management programs. While environmental improvements are evident in some areas, continued and even accelerated environmental degradation, as well as ecological and public health losses, occur in others.

The *Asian Environment Outlook* study⁸ has tentatively concluded that policy integration is required, with environmental objectives factored into the development policies of national, economic, and sectoral agencies. Environmental policies and objectives in isolation, supported by a stand-alone environmental institutional framework, are clearly inadequate.


The recognition of the need for better environmental policy integration has coincided with a significant increase in ADB policy-based lending through program loans, sector development program loans, or policy agenda attached to project loans. ADB now rarely provides a loan for a project without requiring considerable policy reform by the borrower.

Policy-based lending also presents the opportunity to integrate environmental policy objectives in policy dialogue for loans, regardless of the sector. For example:

- in the transport sector, policy reform may include policies connected with vehicular emissions or fuel quality;
- an energy sector loan may include policies calling for increased access to renewable energy or demand-side management for energy;
- industrial sector loans can incorporate policies promoting cleaner technology and improved compliance with environmental regulations;
- loans in the agriculture sector can include policies relating to community participation and environmental management monitoring of natural resources; and
- in the urban sector, lending can include policies relating to cost recovery for wastewater and solid waste management, stimulating accelerated environmental infrastructure development, and improved services.

There are many similar examples in each sector.

One of the key changes in ADB's environment program is to give increased attention in country programming and loan-related policy dialogues to integrating environmental objectives into national and sectoral development plans, and in design of project- and policy-based loans.



Environmental policies and objectives in isolation, supported by a stand-alone environmental institutional framework, are clearly inadequate. The recognition of this need for better environmental policy integration has coincided with a significant increase in ADB policy-based lending.

STRENGTHENING ENVIRONMENTAL REVIEWS

Environmental Assessment

ADB has a good track record in the application of EIAs, where possible redesigning projects to avoid such impacts, mitigating unavoidable impacts, and incorporating comprehensive environmental management programs to generate optimum environmental benefits from ADB-supported loans.

However, the EIA process, which has evolved over the last 20-25 years, and the lessons learned from ADB operations, show that there is a gap in addressing broader issues, such as the cumulative impacts of development; and the impacts of policies, plans, and programs. ADB's revised EA guidelines will tackle these issues. The revised guidelines include improved sector-specific EIA guidelines, SEA guidelines, and cumulative impact assessment guidelines.

The quality of EA reports will be further improved. A peer review process, recently initiated, will be continued and will be participated in by staff comprising the Environment Network. Checklists are being developed and tested to improve the procedural compliance with ADB EA requirements and the quality of EA reports.

Strengthening Environmental Management

Critical reviews undertaken during the past 12 months indicate that ADB should adequately address environmental issues of environmentally-sensitive projects during project implementation. There is, in some cases, inadequate follow-up by ADB review and administration missions. To address future similar problems, ADB is developing a set of environmental review guidelines for project implementation and will undertake a number of project reviews to test the guidelines. Once the guidelines are fully developed, a training program will be provided to relevant staff in the ADB Headquarters and Resident Missions.

Recent critical reviews show, however, that there has been, in some cases, inadequate follow-up by ADB review and administration missions, which were carried out to ensure that environmental management programs are implemented as intended and that projects do not result in unexpected adverse environmental impacts. A set of planned and systematic activities will be identified to provide adequate confidence that all agreed environmental mitigation measures related to project quality will be complied with during implementation.



There must be adequate follow-up by ADB review and administration missions, to ensure that environmental management programs are implemented as intended and that projects do not result in unexpected adverse environmental impacts.

Moreover, the quality of supervision for environmentally-sensitive projects will be ensured with the introduction of a quality enhancement assurance system. At the core of this system are three elements: (i) the development of quality assurance procedures; (ii) adoption of timely compliance monitoring and audit of environmentally-sensitive loan projects through fielding of project review missions; and (iii) the development of a data base to monitor project status.

The increased attention given to environmental issues during project implementation should strengthen the understanding of ADB staff on the environmental aspects of its lending operations and provide important feedback in designing future projects.

ADB provides considerable assistance to DMCs to make sure that they have an opportunity to benefit from global and regional agreements and to assist them in meeting their commitments.



Formulating an Environment Policy

The new poverty reduction strategy has made the preparation of a new environment policy paper timely. The policy will outline ADB's approach to addressing emerging and existing environmental issues. It will also address the environmental constraints to, and opportunities for, poverty reduction, while setting the policy and procedures to ensure integration of environmental concerns into policy-based, sector, and project lending. ADB's role in global environmental actions and strategies for subregional and national actions will also be defined. By clearly enunciating its environment policy, synergies from within ADB and other development agencies, DMCs, and NGOs will be generated.

Improving Regional and Global Operations

Over the last few years, ADB has taken an increasing role in global environmental initiatives and programs. It is rarely an active partner in the development of global treaties and protocols, since it is not a part of the United Nations system. ADB, nevertheless, provides considerable assistance to its DMCs to make sure that they have an opportunity to benefit from such agreements and to assist them in meeting their commitments. ADB has substantially increased its lending for projects that meet local environmental needs while achieving global benefits. These include a diverse portfolio of lending and technical assistance for biodiversity conservation, use of renewable energy, promoting cleaner production, and improving energy efficiency (see also Part IV).

Developing an Environment Data Base Center

Starting in 2000, the Environment Division will gradually develop an environment data base center of direct and immediate application to ADB's assistance program to its DMCs. This will be done in cooperation with other regional agencies, most notably the United Nations Environment Programme's (UNEP) regional office in Bangkok. An initial step in this direction was taken early this year by testing the use of the geographic information system (GIS) in identifying critical spatially-based parameters of rural poverty (e.g., relationships between the location of pockets of rural poverty and physical characteristics such as degraded lands).

Moreover, an environmental resource data base will also be set up on poverty, urban environment, and other country environment-related data. GIS will also be used in this, where applicable.

Enhancing Resource Center Activities

ADB's Environment Division will give renewed impetus to its resource center activities. It will continue to publish success stories and new initiatives in the environment field, promote an exchange of ideas, and conduct training on emerging fields. To exchange ideas and promote increasing awareness of emerging environmental issues, ADB staff will be encouraged to participate in or attend technical assistance-funded regional conferences and workshops to be held at the ADB Headquarters.

IMPLEMENTATION STRATEGIES

To push through with its environment program, ADB will adopt strategies that enhance the efficiency and effectiveness of its operations. It will seek to maximize the use of its human resources; improve collaboration with other MDBs and development organizations; exercise greater selectivity in programming environmental capacity building projects; sharpen the skills of staff through intensive training; and embark on knowledge management through networking among staff.

Strengthening Partnerships

ADB will increase collaboration and coordination with various development agencies and the private sector to boost development impacts. There will be more coordinated country assistance programming to promote synergy and avoid project overlap. ADB will coordinate with MDBs, for example, in assisting its DMCs to promote pollution prevention and avoid expensive overlaps to enhance the aggregate impact of their assistance as a group. ADB will continue to be proactive in collaborating with other MDBs through the MDBs Working Group on Environment under the Development Committee.

Through this Working Group, ADB will seek to achieve the following:

- harmonization on the use of EA tools for project and policy-based loans;

There will be more coordinated country assistance programming to promote synergy and avoid project overlap.



- knowledge-sharing of best practices, guidelines, and successful policy and institutional reforms across sectors and countries; and
- access to lessons learned from postevaluation works (sector work, projects, programs, EIA, and SEA).

Changing Priorities

Technical assistance grants for environmental capacity building projects will be utilized more strategically to support the emergence of good environmental governance. ADB will give higher priority to environmental capacity-building projects focusing on legislation, policy, and planning, as these areas are crucial to good governance. It may be noted that these have lagged behind compared with environmental management, institutional strengthening, and human resource development in grant allocation.

Sharpening Staff Skills

Transforming ADB into a broad-based development institution equipped with a pool of expertise and knowledge will require skills development and intensive training of its staff. With the proposed reengineering of environmental operations, skills development through internal and external training will be a key requirement if increased operational efficiency and effectiveness are to be achieved. Staff skills will be sharpened on the emerging environmental dimensions of development, including poverty reduction, SEA, policy analysis and design, institutional diagnosis, environmental management during project implementation, GIS, and other emerging fields.

Managing Knowledge through the Environment Network

Given the increasing complexity of ADB operations in general, and environmental operations in particular, a knowledge-storing practice by ADB staff should be changed to an open and shared system, which is the hallmark of networking activity. Environment networking will improve the quality of country operations and project review work, as well as in conceptualizing environmental projects at the project preparation stage. Networking will also be used to improve project implementation and compliance monitoring of agreed environmental management measures.

The Environment Network will continue to serve as a forum for generating ideas to improve the quality of ADB's environment program, business processes, and outputs. It will supplement the strategic thinking processes to drive the environment agenda of ADB.

PART II NOTES

⁸ TA REG 5654, *A Study of Emerging Asia*, for \$1.5 million, approved on 12 December 1995.