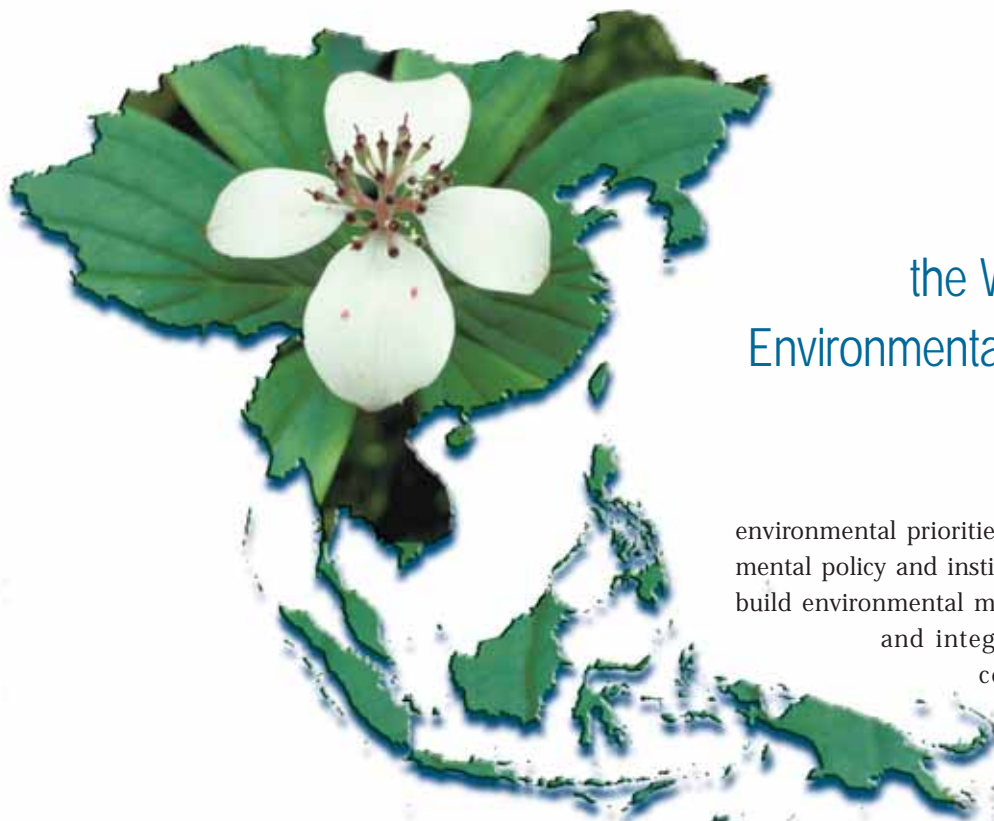


2

Overview of the World Bank's Environmental Assistance



The World Bank has been supporting client countries in the region to address their environmental challenges through the financing of projects with environmental objectives, analytical work, advice, and support for capacity building. In addition, through the implementation of its environmental and social development policies, the Bank has introduced tools and procedures to ensure that all projects and programs financed by the Bank adhere to internationally accepted good practices in environmental management.

Supporting Analysis and Capacity Building

The Bank has been supporting numerous analytical and technical assistance activities in a wide range of topics in order to help identify

environmental priorities, establish environmental policy and institutional frameworks, build environmental management capacity, and integrate environmental considerations into sectoral strategies, plans, and programs. The following takes stock of some of these activities.

Exploring environment-poverty linkages. The Bank has recently launched several studies to strengthen the understanding of environment-poverty linkages, and to work with client countries to address these linkages, particularly in the context of the preparation of poverty reduction strategies (box 1.2). The Bank has been engaging with development partners—for example, in Cambodia, Mongolia and Vietnam—to integrate environmental issues into the preparation and implementation of Poverty Reduction Strategies.

Assessing the health impacts and economic costs of pollution. Several Bank studies assessed the health impacts and economic costs of pollution and other forms of environmental degradation (Ostro, 1994, World Bank, 1997a and 1997b). These studies helped decisionmakers

set priorities and introduce effective measures and programs, for example, they supported measures to phase out lead from gasoline, and an increased focus on particulate matter as a key air pollutant with serious health impacts. Methodologies piloted by the Bank in these studies are being further developed in countries in the region, for example in China, where a multi-year program is under way to build an environmental cost model and refine the valuation of environmental health risks. This work is linked with ongoing efforts to introduce environmental (“green”) accounting at the national and provincial levels in China.

Developing strategies for NRM and biodiversity protection. The Bank has been promoting integrated natural resource management and an ecosystem approach to conservation and biodiversity management. Strategies have been developed for a number of NRM issues such as forestry, biodiversity, and water resources management. For example, the Bank has supported the preparation of the Biodiversity Strategy in Indonesia, a comparative study of coastal resource management in the Pacific Islands, and a protected area systems review of the Indo-Malayan realm, as well as water resource management strategies in China and the Philippines. Analytical assistance has also focused on coastal zone and fisheries management (for example, in Vietnam), land management policy reform (Cambodia, China, Indonesia, Mongolia, and the Philippines), and forest management and governance issues (Cambodia, China, Indonesia). Nevertheless, despite

more than a decade of emerging attention to environmental management, countries in the region are just starting to recognize the importance of natural resource management issues for sustainable economic development (Crooks, et al 1999).

Helping develop environmental policies and regulatory frameworks. In several countries, including China, Indonesia, the Philippines, and Thailand, the Bank has helped establish environmental regulations. For example, the Bank supported the introduction of environmental charges in the Philippines, differentiated taxation and the introduction of cleaner fuel regulations in Thailand, and regulations and programs to phase out leaded gasoline in the Philippines, Thailand, and Vietnam. Building on lessons from regional programs and worldwide experience (Lovei 1998, 1999), the Bank, together with other partners, helped Vietnam switch to unleaded gasoline virtually overnight in 2001 (ESMAP, 2002). In addition, the Bank has been assisting in the establishment of environmental assessment frameworks, environmental institutions, and public participation practices to strengthen environmental management in numerous countries in the region. Currently, institutional capacity building programs—supported by the Institutional Development Fund (IDF)—are under way in China, Mongolia, the Philippines, and Vietnam.

Monitoring environmental trends supporting the disclosure of environmental information. Public disclosure of environmental informa-

tion is a promising approach for encouraging pollution prevention and abatement in enterprises (Wheeler and others, 2000). Bank-supported public disclosure programs—such as PROPER in Indonesia and EcoWatch in the Philippines—make available to the general public indicators of the environmental performance of industrial enterprises based on a rating system. This type of programs have been shown to promote improved environmental performance even in countries with limited environmental regulatory capacity. Recently,

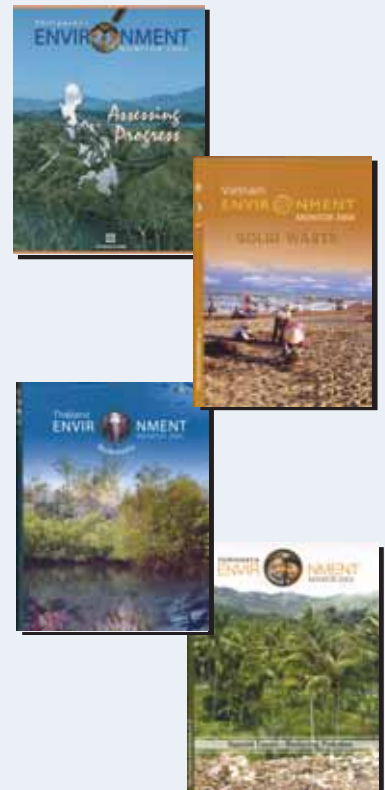
the Bank has initiated follow-up to the PROPER program in Indonesia, and pilot environmental information and disclosure programs in Hanoi, Vietnam, and in Hohhot and Zhenjiang, China. In the Philippines, it also helped clients explore the extension of the EcoWatch program to include the public disclosure of information on water quality in beaches. In addition, through the publication of the Environmental Monitor series, the Bank has helped broaden the availability of environmental information (box 2.1).

Box 2.1 Environment Monitors: A Tool for Engaging Clients and Partners

Published annually in seven EAP countries—Cambodia, Indonesia, Mongolia, Papua New Guinea, Thailand, Vietnam, and the Philippines—the *Environment Monitor* series has emerged as a key tool for (a) diagnosis of environmental indicators, trends, and policy issues; (b) awareness raising among policymakers, academics, researchers, and the general public; and (c) partnerships among the public sector, civil society, and development partners. A general Monitor is published every four or five years to take a fresh look at environmental issues and trends, while Monitors focused on pressing issues such as water and air quality, solid waste management, or land management are produced in intervening years.

Launching the Monitors involves seminars, media events, and associated programs. Press coverage of these events has helped raise awareness, foster a dialogue on environmental issues and generate policy change and local action. In order to engage broad audiences, Monitors have been translated into local languages, posted on World Bank country-office websites, and in many cases also on government websites. Special effort has been made to reach out to youth to foster greater appreciation of environmental protection and friendly practices. Increasingly, Monitors are supported in partnership with other donors. The most recent Monitor in Thailand, for example was supported by DANIDA, JBIC, and USAEP/USAID.

Source: EAP Environment and Social Development Unit.



Forging effective partnerships. Environmental partnerships have played an important role in supporting environmental objectives. In the past, regional partnerships and programs such as the Urban Air Quality Management Strategy (URBAIR) and the Metropolitan Environmental Improvement Program (MEIP) have contributed to capacity building in urban and municipal environmental management and to successful programs such as the phaseout of leaded gasoline in several countries. The Bank has engaged in constructive partnerships with numerous civil society organizations, including NGOs and, recently, with religious organizations through the Faith in Conservation

Initiative (box 2.2). The Forest Law and Governance (FLEG) initiative is bringing together government, civil society, and timber industry stakeholders throughout the EAP region to develop plans to reduce illegal logging. The Asia Alternative Energy Program (ASTAE) is another successful partnership with several bilateral donors, placing high priority on fostering public-private sector partnerships, developing new tools, and disseminating lessons learned. At the country level, partnerships for environmental assistance have been formed with bilateral partners and NGOs—for example, in the context of the Country Development Partnership for Environment in Thailand

Box 2.2 Faiths and Conservation Initiative in EAP

The Faith and Conservation Initiative is seeking to engage with major faiths to explore opportunities to promote conservation. The focus has been on biodiversity, forestry, and their links to poverty alleviation. The World Bank has supported activities in a number of countries, including:

- ◆ Cambodia (Buddhist): water resource evaluation, tree planting, environmental education.
- ◆ Indonesia (Muslim): environmental education, development of a model for Islamic environmental management.
- ◆ Indonesia (Christian): creation of an environmental desk in the national communion of Churches, dissemination of material on Christian theology and conservation links, and other awareness raising initiatives.
- ◆ Mongolia (Buddhist): production of handbooks on and support to the management of environmentally significant traditional sacred sites.
- ◆ PNG (Christian): development of a biblically based environment program through the Evangelical Alliance, and preparation of a theological program of environmental study.
- ◆ Thailand (Buddhist): forest management in the Khorat Community Management Project, a series of environment discussion forums, and the dissemination of environmental education material.
- ◆ Timor Leste (Christian): land management activities for slope soil conservation.

Source: EAP Environment and Social Development Unit.

recently established environment trust funds for China and Mongolia, and the preparation of Environment Monitors.

While there are several examples of successful environmental initiatives and programs, their impact on countries' overall environmental management system and positive results on the ground are often difficult to measure. Scaling up successful initiatives and enhancing the focus on the impacts of the Bank's assistance remain key challenges in the coming years.

Financing Projects and Programs with Environmental Objectives

The following provides an overview of the Bank's lending and grant financing programs that support environmental objectives.

Environment and natural resource management in the Bank's lending portfolio. The Bank has developed a significant portfolio of projects and project components that address environmental and natural resource management (ENRM) objectives.¹ The share of ENRM in the region's overall lending portfolio has varied between 5 and 30 percent during the past decade (figure 2.1). In FY04, the active ENRM portfolio in the EAP Region was \$5.3 billion, and is well diversified among sectors such as urban, rural, energy, and transport; as well as thematic areas (figure 2.2). China accounts for more than 80 percent of the regional ENRM

Figure 2.1 Total Bank and ENRM Lending in EAP, FY95–04

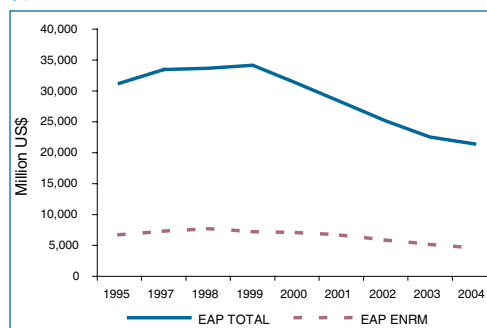
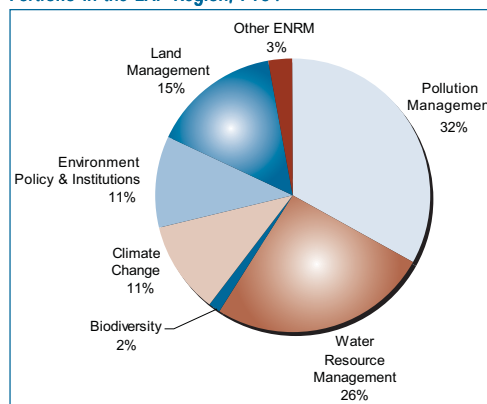


Figure 2.2 Thematic Distribution of ENRM Lending Portfolio in the EAP Region, FY04

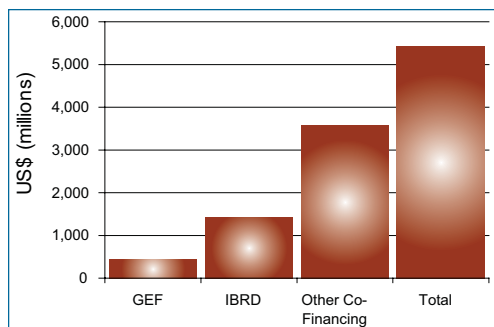


Source: World Bank database.

portfolio at \$4.4 billion. The ENRM portfolio in other EAP countries amounts to approximately \$800 million.

Global program portfolios. In addition to lending, the Bank administers grant facilities to support the implementation of global environmental agreements and the mainstreaming of their objectives into lending operations through the Global Environment Facility (GEF)

Figure 2.3 GEF Grants' Leveraging Effect in EAP, FY92–04

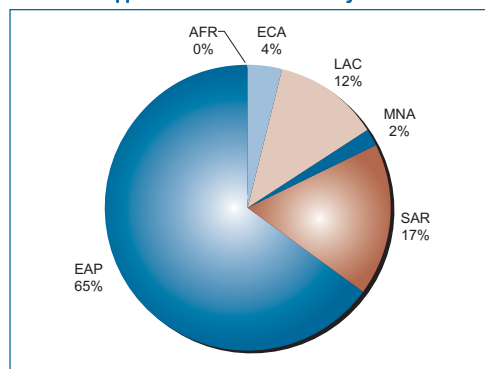


Note: Data are for the period 1992 - 2004.
Source: GEF Secretariat.

and the Ozone Depleting Substance (ODS) phaseout programs.

- ◆ *GEF portfolio.* GEF grants in the amount of \$400 million have been allocated to EAP countries over the past 10 years. Overall, China accounts for one-quarter of the projects and half of the resources allocated by the GEF to the region (see appendix C for more detail). GEF grants leverage significant Bank and other co-financing (figure 2.3).
- ◆ *Montreal Protocol program to phase out ODS.* Through the Multilateral Fund for the Montreal Protocol (MFMP), the Bank is supporting countries' efforts to phase out Ozone Depleting Substances (ODS). The ODS program in the EAP region is the largest among all regions (figure 2.4). As of mid-2003, MFMP commitments totaled \$559 million, of which 80 percent represented commitments to China, which is the largest ODS program in the world (see appendix D for more detail).

Figure 2.4 Regional Distribution of Montreal Fund Cumulative Approvals at the World Bank by 2003



Note: EAP: East Asia and Pacific; AFR: Africa; ECA: Europe and Central Asia, LAC: Latin America and Caribbean; MNA: Middle East and North Africa; SAR: South Asia Region.
Source: World Bank (2004). Montreal Protocol. Successful Partnerships for Ozone Protection—the Case of China.

Financing environmental infrastructure development. Thematically, lending for pollution management-related projects represents the largest part of the ENRM portfolio. By far the largest share of the Bank's pollution management lending is for urban sanitation. In China, sanitation projects make up about two-thirds of the Bank's active urban environment portfolio. In the sanitation sector, the Bank has promoted the creation of autonomous water and wastewater companies and the introduction and adjustment of tariffs and pollution charges, to foster conservation, reduce effluents, and to improve the financial sustainability of operations. Bank-financed urban water supply projects are also being implemented in periurban areas of megacities and in smaller cities through the establishment of financially autonomous water utility companies. In Indonesia, the Philippines, and Vietnam, projects

focus on service provision to poor in urban areas with a special emphasis on community participation. These occur in areas where local governments are ready to implement cost recovery strategies with efficient operation of assets. Generally, Bank projects for solid waste management in urban areas focus on collection, transfer, and disposal of household, commercial, and institutional wastes and, more recently, the establishment and strengthening of autonomous solid waste management companies—for example, in China, Indonesia, and Vietnam. The design and operation of disposal facilities, especially landfills, represents one of the most significant concerns for solid waste management in the region.

Supporting industrial and hazardous pollution abatement. Addressing the environmental challenges of industrial development is an important challenge, particularly in China and Vietnam, where the closure and/or privatization of state-owned enterprises raise issues of appropriate regulatory frameworks, remediation of liabilities, responsible environmental management, public disclosure of environmental performance information, and enforcement capacity. Linking measures for pollution prevention and good environmental management in the industrial sector with the design of environmental infrastructure projects such as wastewater treatment plants is an important challenge, particularly in China. The Bank-supported Environmental Management TA Loan to China included several components to support enhanced regulatory frame-

work (for example through a review of the environmental charge system), and supported environmental monitoring and data management, promotion of cleaner production, and the strengthening of environmental assessment procedures. Hazardous waste management is also a growing concern across countries in the region, calling for action across various levels of government and administrative boundaries. In Guangdong, China, the Bank is supporting hazardous waste management through a treatment center for disposal of hazardous wastes generated by nearby industries. Hazardous waste management issues are also tackled in the context of new programs for the phaseout of persistent organic pollutants.

Phasing out ODS. The Bank's ODS program in EAP is the largest in the world (figure 2.4). As of 2003, 89,000 tons of ODS have been phased out in EAP. The program's goal is to complete the phaseout of regional ODS production and consumption by 2010. This represents the phaseout of 237,000 tons of ODS, nearly 75 percent of the remaining ODS production and consumption in all developing countries. China, one of the world's most successful phaseout programs, is on track to meet its 85 percent CFC reduction target by 2005. This success was made possible by a two-pronged approach. The initial focus was on individual enterprises. The second, policy-based approach took longer to develop, but will have a more sustainable impact. The Chinese Government has supported the program with institutional capacity building, policy instru-

ments, and fiscal incentives; and it is now planning new policies, legislation, monitoring, and enforcement tools to support CFC recycling and domestic production of ODS substitutes in support of the ongoing ODS phaseout. Further, national CFC phaseout plans are being implemented in Malaysia, the Philippines, and Thailand; national CFC and halon phaseout plans are being developed in Vietnam; and there are new sector plans in China, Indonesia, and Thailand. In addition to their contribution to reducing threats to the ozone layer, ODS phaseout programs have contributed to improvements in energy efficiency and environmental management in the industrial sector.

Financing improvements in energy efficiency and renewable energy. Lack of access to energy—around 270 million households are unable to access a source of electricity—is a major development constraint on development in

the region. The EAP renewable energy strategy seeks to support economic growth by meeting energy demand in an environmentally sustainable manner, including a focus on energy efficiency and the use of renewable sources. For example, the Bank is working with the Chinese and Cambodian governments to develop renewable energy action plans. Together with ADB and GEF, the Bank is undertaking a renewable energy project to overcome market barriers to renewable technologies in rural Cambodia, and a number of initiatives are underway to help China increase its renewable energy generation and use. In other countries, such as Cambodia, Indonesia, Laos, and Vietnam, the Bank has initiated rural electrification projects using renewable technologies.

Supporting integrated water resource management. Several projects support water resources

Box 2.3 Integrated Natural Resource Management in China

The Loess Plateau project in the Yellow River watershed demonstrated an economically viable and environmentally sustainable integrated watershed management model, one of the largest and most successful in the world. Key to the success of this project was the conversion of slopes to level fields, which significantly reduced erosion and helped maintain moisture in the soils, allowing higher crop yields and more diversified cropping patterns.

Annual sediment inflow to the Yellow River was reduced by 57 million tons. Over one million farmers directly benefited with some impressive increases in grain output, fruit production, and per capita income. Furthermore, terracing, and mechanization have significantly reduced labor inputs, and many farmers are now pursuing alternative income sources.

These results appear to be highly sustainable. The government is now planning to apply the model to other national projects.

Source: Project Implementation Completion Report.

development and management to (a) allocate water for environmental/ecological purposes; (b) control sources of pollution in water bodies, taking into account assimilative capacity; and (c) preserve coastal zones, marine and inland fisheries, upland forest, and wetlands and their habitats (box 2.3). The Yangtze Basin Water Management Project was the first Bank-supported comprehensive water resources operation in China. Others followed—for example, the GEF-supported Hai Basin Integrated Water and Environment Protection Project, which sought to reduce land-based wastewater discharges to improve the Bohai Sea environment. The Tarim Basin II Project supported, among others, the establishment of the Water Resources Commission and the introduction of water utilization quotas in the tributary sub-basins.

Financing sustainable forest management and biodiversity conservation. The World Bank is the largest source of development finance for forestry in the region. China has by far the highest share of the forest lending portfolio in the region (77 percent) followed by Vietnam (13 percent). The portfolio is diverse, addressing forest tenure reform, forest industry reform, as well as biodiversity protection and sustainable environmental management. In China, for example, the Nature Reserves Management Project created incentives for sustainable resource use and improved biodiversity conservation and management in nine of the country's most significant nature reserves. Monitoring over the life of the project revealed

a growth in forest cover in the targeted reserves, and recovery of populations of key species. Several biodiversity projects support the implementation of biodiversity strategies. For example, the Hon Mun Marine Protected Area Pilot Project is assisting Vietnam to implement priority programs under its Biodiversity Action Plan (BAP). The BAP identifies the development of a national system of Marine Protected Areas (MPAs) and the conservation of the Hon Mun as priority actions for biodiversity conservation. Among others, the project is building the capacity of the Ministry of Fisheries and other agencies to implement their responsibilities for marine environmental management. It is also developing a model for cross-sectoral management of marine biological resources that has wider application as Vietnam develops its MPA system, and is providing local stakeholders with a strong role in the management of the marine resources on which their livelihoods depend. Several projects link the protection on biodiversity with improving poor people's livelihoods (box 2.4, page 34).

Capacity building. Several investment projects include components for environmental capacity building and institutional development, linked with the projects' main focus. For example, urban transport projects, aimed at improving urban transport services and management, often include components for air quality monitoring and management. If designed and implemented well, such capacity building components can enhance the sustainability of projects, and contribute to long-term institu-

Box 2.4 Coral Reef Rehabilitation and Management Program (COREMAP) in Indonesia

The Government of Indonesia (GOI) initiated a 15-year multi-donor Coral Reef Rehabilitation and Management Program (COREMAP) in 1998, with the support of the World Bank and GEF financing. The project's first phase highlighted some of the challenges facing coral reefs and the communities that depend upon them. Many of these reefs were exposed to unsustainable levels of pressure from fishing, exacerbated by inappropriate harvesting techniques. COREMAP supports coral reef community management to protect coral reefs, improve fishery productivity, and enhance coastal livelihoods.

During the second phase of COREMAP, the GOI made an important policy shift toward the use of marine protected areas (MPAs) as a tool for the sustainable management of coral reef ecosystems and the small-scale fisheries they support. COREMAP II is a six-year, \$80 million program that will be implemented in 12 coastal districts, and will benefit 1,500 coastal villages and more than 500,000 residents. Through a participatory planning process, COREMAP II will help create marine reserves within existing national parks and MPAs of recognized global value, to support the rejuvenation of coral reefs and small-scale reef fisheries. In addition, a learning network will also be established, linking key marine sites and conservation efforts throughout the archipelago to exchange lessons learned and expertise. This ambitious program has put Indonesia at the forefront of the marine and coral reef conservation effort.

Source: World Bank project documents.

tional development. It has been challenging, however, to support the development of policy and institutional capacity systematically through projects.

Implementing the Bank's Environmental and Social Development (Safeguard) Policies

The Bank's environmental and social development "safeguard" policies reflect internationally accepted principles and agreements on

environmental and social development objectives and best practices.² These policies provide a key tool for integrating environmental and social development considerations into the development and implementation of projects and programs supported by the Bank. Besides ensuring that potential negative impacts of Bank operations are minimized and appropriately addressed, the policies and their implementation have a significant demonstration effect and provide an opportunity for capacity building in environmental management.

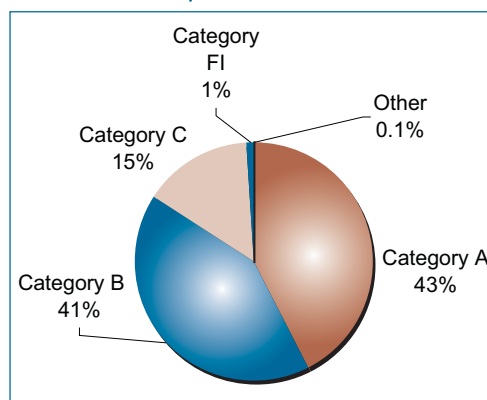
Through the application of its safeguard policies the Bank has supported national, provincial, and municipal environmental agencies in

developing domestic environmental assessment (EA) procedures to enhance their technical competence, effectiveness, and credibility. It has also helped government agencies at various administrative levels to mainstream considerations into sectoral decisionmaking processes, and has trained counterparts in environmental management. The application of Bank policies has also promoted the engagement of stakeholders in a dialogue about projects and plans, and helped make such engagement accepted practice in client countries' project development processes.

Through the EAP Safeguard Secretariat, a systematic review, monitoring, and feedback process is in place to ensure that environmental and social development issues are considered, risks are systematically evaluated, and compliance with the Bank's safeguard policies is achieved for Bank-financed operations in the region. Nearly 70 percent of the active EAP portfolio by number of projects, and more than 80 percent by commitment amount, are environmental category A, B, or FI projects that undergo environmental assessment or environmental analysis (see figure 2.5). The safeguard review process also provides a mechanism for identifying opportunities for integrating environmental objectives and components into project design.

In recent years, as part of a broader harmonization agenda among development institu-

Figure 2.5 Distribution of the EAP Lending Portfolio by Environmental Assessment Categories, according to Commitment Amounts, FY04



Note: The World Bank's operational policy on environmental assessment, OP 4.01, classifies: (a) Category A projects to have significant adverse environmental impacts that are sensitive and diverse and require full environmental assessment; (b) Category B projects have potential adverse environmental impacts on human populations or environmentally important areas, and require less extensive environmental analysis; (c) Category C projects entail negligible or minimal direct disturbance to the physical setting and require no environmental assessment or analysis; and (d) Category FI projects involve investment of Bank funds through a financial intermediary in subprojects and may result in adverse environmental impacts. Financial intermediaries are required to screen proposed subprojects and ensure that sub-borrowers carry out appropriate environmental analysis.
Source: Business Warehouse.

tions, the Bank has been also working with international financial institutions (IFIs)—including the ADB and the Japan Bank for International Cooperation (JBIC)—to harmonize their environmental policies, procedures, and requirements so as to reduce the burden of multiple requirements on client countries. This work has led to the adoption of common principles and procedures among development partners, and country-level piloting of the use of standard documentation for environmental assessments in countries such as Vietnam.

Summary

Over the past decade, the Bank has developed a diverse range of environmental programs and activities in the EAP region. In the absence of an explicit environment strategy, these activities have responded to emerging country demands, and focused primarily on project-specific interventions. Looking to the future, the challenge will be to scale up project-specific efforts, focus on the environmental and development outcome of programs, strengthen the strategic focus on priority environmental challenges at the country and regional level, and find mechanisms for long-term engagement in policy dialogue and for supporting policy and institutional development systematically. In the pursuit of this objective, the Bank is

working in partnership with a wide range of stakeholders and partners.

Notes

1. The Bank's sectoral and thematic coding system captures ENRM objectives throughout the Bank's operations, irrespective of their sectoral affiliation and managing units. ENRM objectives are captured under the following categories: biodiversity protection, climate change, environmental policies and institutions, land management, pollution management and environmental health, water resource management, and other.
2. The Bank's ten "safeguard policies are: OP 4.01 Environment Assessment; OP 4.12 Involuntary Resettlement, OP 4.04 Natural Habitats; OD 4.20 Indigenous Peoples; OP 4.09 Pest Management; OP 4.37 Safety of Dams; OPN 11.03 Cultural Property; OP 7.50 International Waterways; OP 4.36 Forestry; and OP 7.60 Disputed Areas.