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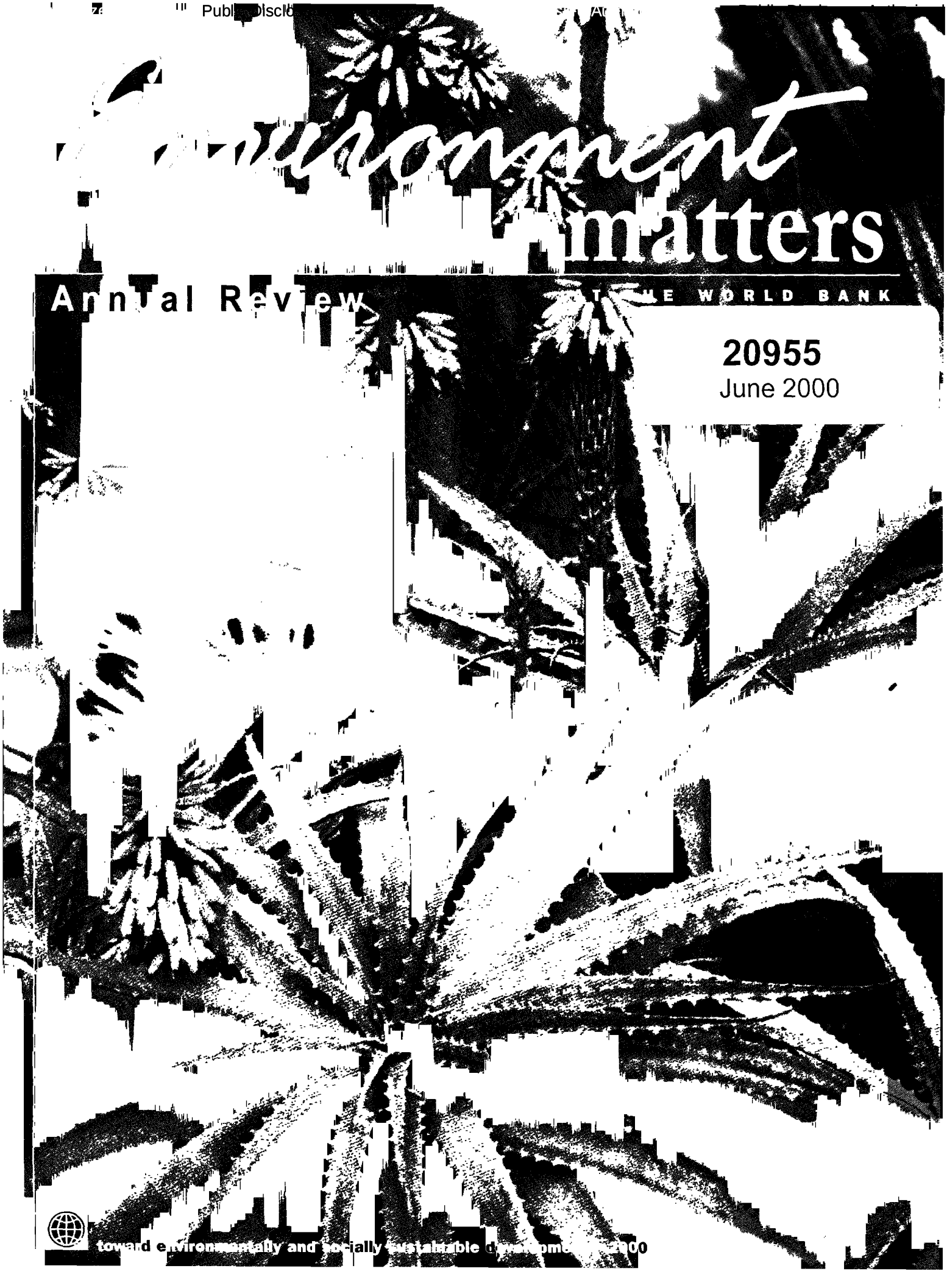


Environment matters

Annual Review

THE WORLD BANK

20955
June 2000

toward environmentally and socially sustainable development 2000

World Resources 2000–2001

World Resources 2000–2001 is produced by the World Resources Institute in partnership with the United Nations Environment Programme, United Nations Development Programme, and the World Bank. This edition—*People and Ecosystems: The Fraying Web of Life*—focuses on the current condition of five critical ecosystems that have been shaped by the interaction of the physical environment, biological conditions, and human intervention: croplands, forests, coastal zones, freshwater systems, and grasslands. This Pilot Analysis of Global Ecosystems (PAGE) is the first step in the development of a more comprehensive Millennium Ecosystem Assessment.

A summary of the PAGE results are shown in the accompanying scorecard. Overall, there are considerable signs that the capacity of ecosystems to continue to produce many of the goods and services we depend on is declining. PAGE results make it clear that human activities have begun to significantly alter the Earth's basic chemical cycles—the water, carbon, and nitrogen cycles—that all systems depend on.

"If we choose to continue our current patterns of use, we face almost certain declines in the ability of ecosystems to yield their broad spectrum of benefits—from clean water to stable climate, fuelwood to food crops, timber to wildlife habitat. We can choose another option, however. It requires reorienting how we see ecosystems, so that we learn to view their sustainability as essential to our own. Adopting this "ecosystem approach" means we evaluate our decisions on land and resource use in terms of how they affect the capacity of ecosystems to sustain life, not only human well-being but also the health and productive potential of plants, animals, and natural systems. Maintaining this productivity becomes our passkey to human and national development, our hope to end poverty, our safeguard for biodiversity, and our passage to a sustainable future."

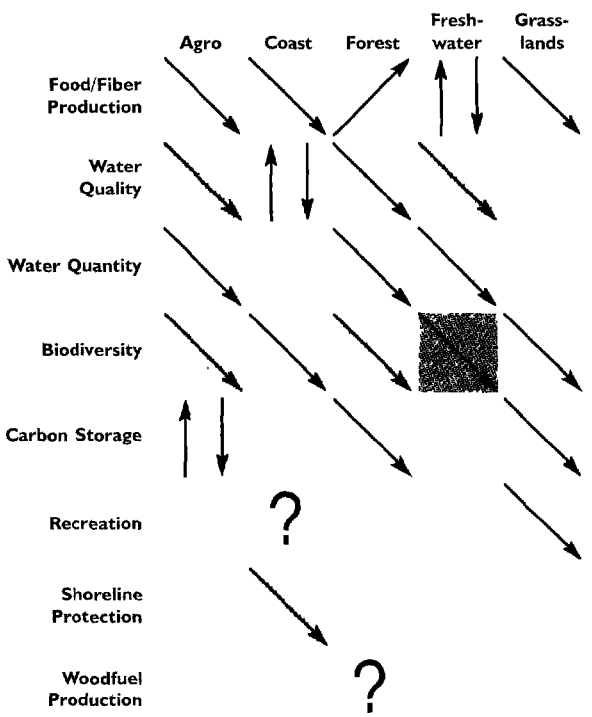
Mark Malloch Brown
Administrator, UNDP

James D. Wolfensohn
President, World Bank

Klaus Töpfer
Executive Director, UNEP

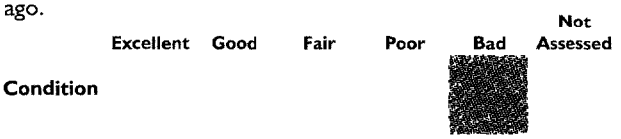
Jonathan Lash
President, WRI

SCORECARD

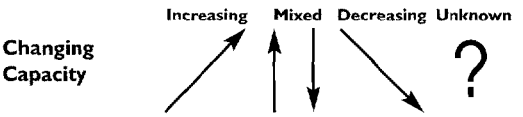


KEY

Condition assesses the current output and quality of the ecosystem good or service with output and quality of 20–30 years ago.

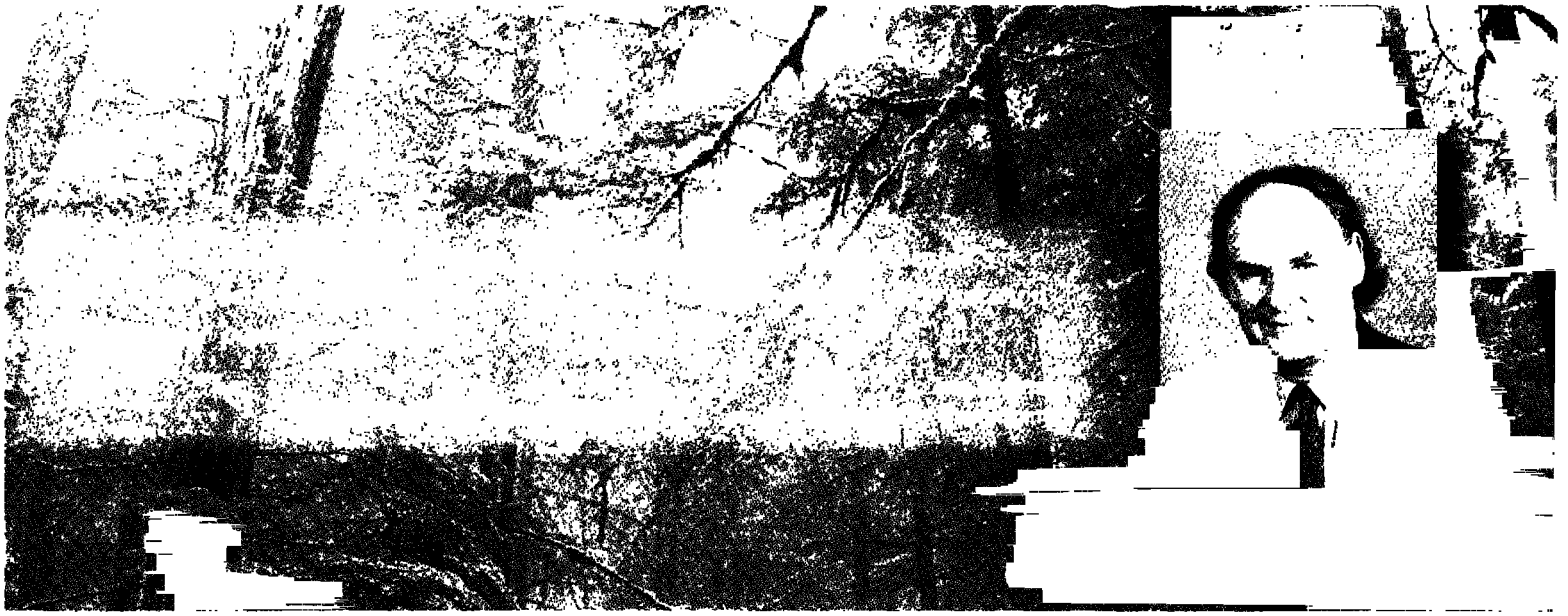


Changing Capacity assesses the underlying biological ability of the ecosystem to continue to provide the good or service.



Scores are expert judgments about each ecosystem good or service over time, without regard to changes in other ecosystems. Scores estimate the predominant global condition or capacity by balancing the relative strength and reliability of the various indicators described in the notes on data quality. When regional findings diverge, in the absence of global quality, weight is given to better-quality data, larger geographic coverage, and longer time series. Pronounced differences in global trends are scored as "mixed" if a net value cannot be determined. Serious inadequacy of current data is scored as "unknown."

For more information on *World Resources 2000–20001*, please visit the website — http://www.wristore.com



HIGHLIGHTS

"The Environmental Agenda for the 21st Century must build on past successes, capitalize on advances in information and monitoring technologies, and build better governance."

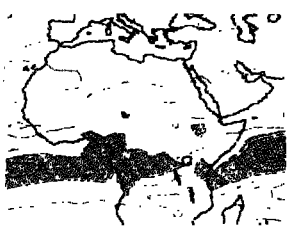
— *Klaus Töpfer*
Executive Director, United Nations Environment Programme

There are signs that a new working partnership—government, business, and civil society—is emerging for the promotion of sustainable development. But environmental trends on the ground, especially in developing countries, remain alarming."

— *Kristalina I. Georgieva*
Director, Environment Department of the World Bank

The traditional balance of power between corporations and governments has changed, and business therefore has to come to grips with new definitions of corporate responsibility. Corporate environmental and social values have to be redefined alongside traditional values such as profitability, and integrated even more deeply into the heart of strategic thinking and everyday practice."

— Peter L. Woicke
Executive Vice President, International Finance Corporation



The concerns raised in the context of the climate change debate simply reinforce the urgency to address the fundamental problems facing poor people."

— *Robert T. Watson and Richard Ackermann*
Chief Scientist and Director, ESSD; Sector Director SASEN

Environment Matters is a magazine of the World Bank Group. This 2000 issue is an annual review of the Bank's environmental work during fiscal 2000. Also visit the magazine through the Bank's website — http://www.worldbank.org.

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All $ = U.S. dollars.

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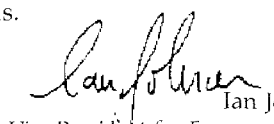
Welcome to a new *Environment* matters...

This issue is "new" in several respects. We have included discussions on a number of matters of current interest, as well as reporting on the past year. We have contributions from staff across the ESSD Network, as well as outside the Bank. In future editions, we will continue to present a broad range of views. Furthermore, this is the first issue of *Environment Matters* printed entirely in color.

This issue of *Environment Matters*, which serves as our annual review on the environment and looks back on the World Bank's environmental activities from July 1999 to June 2000 (our fiscal year 2000), describes many of the Bank's accomplishments and the challenges that lie ahead in the environment area.

The Environment group, along with the Rural Development and Social Development groups, comprise the three "families" of the Environmentally and Socially Sustainable Development Network (ESSD). Each group has a distinct mission:

- The Environment group aims to ensure that the environment is taken into account in Bank projects and programs. This is accomplished in part through its responsibilities for the Bank's environmental assessment procedures and safeguard policies.
- The Rural Development group seeks to enhance global food security and rural well-being by stimulating rural growth and development, eliminating rural poverty, and intensifying agricultural systems in a sustainable way. The rural sector strategy focuses on the entire rural productive system. For example, the management of natural resources in sustainable production systems treats agriculture, forestry, aquaculture, and livestock as part of a larger system. Human capital development, infrastructure, and social development are integrated into rural development strategies and programs.
- The Social Development group aims to promote equitable, inclusive, and sustainable development. This group also addresses the social constraints to economic development, such as ownership, participation, civil engagement, and local capacity building. A major pillar of the Bank's overall agenda is support for community-based approaches and the involvement of local people and NGOs. NGOs are often the social actors who provide crucial information to the Bank in identifying development problems.



Ian Johnson
Vice President for Environmentally and Socially Sustainable Development

About the Cover:
Blooming cactus, Morocco.
COREL

The World Bank Group			
The World Bank			
IBRD	**IDA**	**IFC**	**MIGA**
International Bank for Reconstruction & Development	**International Development Association**	**International Finance Corporation**	**Multilateral Investment Guarantee Agency**
Estb 1945 181 countries [illegible] subscribe to its capital	Estb 1960 161 members	Estb 1956 174 countries	Estb 1988 152 members
[illegible]	[illegible]	[illegible]	[illegible]

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An Environmental Agenda for the 21st Century

VIEWPOINT by Klaus Töpfer,
Executive Director of the United Nations Environment Programme

As we enter the 21st century, it is important to recognize that although it is the scientific and technical challenges of sustainable development and environmental protection that will occupy the attention of most people, it is the institutional and behavioral challenges that will prove to be more formidable over time.

Facing the environmental challenges of the 21st century will, ultimately, be a matter of good policies, effective leadership creative and adaptable agencies, concerned and involved citizens, good information, and rational decisionmaking. Without institutions that are able to connect across problems and set priorities our policies for the environment in the new millennium will be disjointed. Without a sound analytical basis for understanding problems and comparing alternative ways to respond to them, economic values will suffer, and the current high levels of political support for environmental protection could decline.

Let us not forget that a central fact of our time is the collapse of the long term view as a buffer against harsh reality. The "doubling time"—the time it takes for a population to double, or for forest depletion to double, or the demand for energy to double—once comfortably measured in generations, has now collapsed to a matter of a few years. This means that for all of us the difference between short-term and long-term decisionmaking is fast disappearing when it comes to issues of environment and development.

The Global Environment Outlook 2000 report* of the United Nations Environment Programme provides a compelling assessment of the serious nature of the environmental threats faced by the international community. Environmental threats resulting from the accelerating trends of urbanization and the development of megacities; the tremendous risk of climate change, the freshwater crisis and its consequences for food security and the environment; the unsustainable exploitation and depletion of biological resources; drought, desertification, and uncontrolled deforestation; increasing environmental emergencies the risk to human health and the environment from hazardous chemicals; and land-based sources of pollution are all issues that need to be addressed. There is also a need to pay special attention to unsustainable consumption patterns among the richer segments in all countries, particularly developed countries.

The environmental agenda for the 21st Century must build on past successes capitalize on advances in information and monitoring technologies, and build better governance. It must aim at continuous environmental improvement that respects the importance of social and economic health.

These crucial challenges were recognized by the Ministers of the Environment, who met at UNEP's First Global Ministerial Environmental Forum in Malmo, Sweden in May 2000. Over 500 delegates from more than 130 countries—including over 100 ministers, and representatives of IGOs and NGOs—attended the three-day Forum. The purpose of the Forum was to institute a process for regaining policy coherence in the field of the environment, in direct response to the need for such action emphasized in the 1998 report of the UN Secretary-General on environment and human settlements.

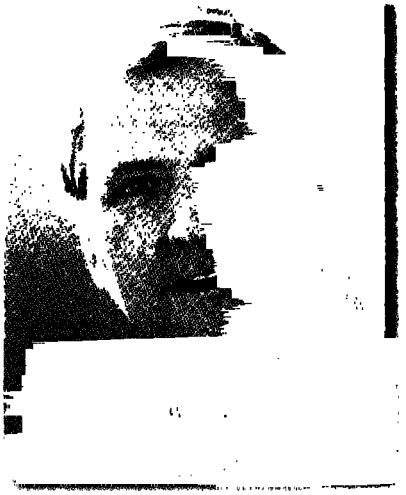
The "Malmo Declaration"*—which was the principal output of this forum and is addressed to the Millennium Assembly—acknowledged that the central challenge is to work out how the global ambitions contained in the increasing number of international environmental agreements can be turned into concrete local action and implementation. While countries may join in the formulation and signing of ambitious global agendas, garnering support and invoking action in a domestic context is often a different story. The mobilization of domestic and international resources, including development assistance, far beyond current levels is vital to the success of this endeavour. There is an urgent need for reinvigorated international cooperation based on common concerns and a spirit of international partnership and solidarity. The global community must also recognize the central importance of environmental compliance, enforcement and liability, and promote the observation of the precautionary approach as contained in the Rio Principles.*

Let us not forget that in our globalizing world, the agenda is set by economics. It is necessary to take environmental perspectives into account in both the design and the assessment of macroeconomic policymaking, as well as practices of government and multilateral lending and credit institutions such as export credit agencies. The potential of the new economy to contribute to sustainable development should be further pursued, particularly in the areas of information technology, biology, and biotechnology. The ethical and social implications must be carefully considered. There must be recognition of the public interest in knowledge related to biodiversity, including the interest of indigenous and local communities.

The private sector has emerged as a global actor that has a significant impact on environmental trends through its investment and technology decisions. The Global Compact established by the Secretary-General of the United Nations with the private sector provides an excellent vehicle for the development of a constructive engagement with the private sector.

There is also the need for the enhancement of the institutional and regulatory capacities of governments to interact with the private sector. A greater commitment by the private sector should be pursued to engender a new culture of environmental accountability through the application of the polluter-pays principle, environmental performance indicators and report-

VIEWPOINT



ing, and the establishment of a precautionary approach in investment and technology decisions. This approach must be linked to the development of cleaner and more resource-efficient technologies for a life-cycle economy and efforts to facilitate the transfer of environmentally sound technologies.

Over the past two decades, civil society has emerged as a vibrant new social and economic sector of activity alongside the public sector and the private for-profit sector. New elements of civil society have emerged with unparalleled rapidity in nations throughout Latin America, Africa, Asia, the Middle East, and Eastern Europe.

Global civil society acts as the emerging global moral consciousness. In the past, it has acted as the promoter of the moral ideas and prescriptions contained in the Universal Charter of Human Rights* as well as the Declarations on the environment at Stockholm and Rio. In many respects, global civil society speaks for the world concerning sustainable development, freedom, peace, equality, solidarity, and justice. This demand is centered on practical matters and issues: the fight against famine and hunger in the world; the improvement of women's conditions at work and home; preservation of the environment; and reduction of poverty, social exclusion, and intolerance, with a view to eradicating the main causes of ethnic and interstate wars.

Let us not forget that a central fact of our time is the collapse of the long-term view as a buffer against harsh reality.

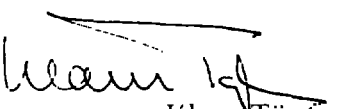
The engagement of these organizations can be strengthened through freedom of access to environmental information, broad participation in environmental decisionmaking, as well as access to justice on environmental issues. Governments must promote conditions to facilitate the ability of all parts of society to have a voice and to play an active role in creating a sustainable future.

The decadal review of the implementation of the outcome of the United Nations Conference on Environment and Development in 2002 will provide a unique opportunity for the global community to reinvigorate the spirit of Rio. The Environment Ministers who gathered at Malmo stated that the objective of this summit should not be to renegotiate Agenda 21, which remains valid, but to inject a new spirit of cooperation and urgency based on agreed actions in the common quest for sustainable development. They recognized the need for governments and the environmental authority of the United Nations system—UNEP—to play a major role in the preparation for this review at the regional and global levels, as well as in ensuring that the environmental dimension of sustainable development is fully considered on the basis of a broad assessment of the state of the global environment.

According to the Malmo Declaration, the 2002 conference should aim to address the major challenges to sustainable development and in particular the pervasive effects of the burden of poverty on a large proportion of the Earth's inhabitants counter-posed against excessive and wasteful consumption and inefficient resource use that perpetuate the vicious circle of environmental degradation and increasing poverty. It must review the requirements for a greatly strengthened institutional structure for international environmental governance based on an assessment of future needs for an institutional architecture that has the capacity to effectively address wide-ranging environmental threats in a globalizing world.

At the dawn of this new century we have at our disposal the human and material resources to achieve sustainable development, not as an abstract concept but as a concrete reality. The unprecedented developments in production and information technologies, the emergence of a younger generation with a clear sense of optimism, solidarity and values, women increasingly aware and with an enhanced and active role in society—all point to the emergence of a new consciousness. We can decrease poverty by half by 2015 without degrading the environment; we can ensure environmental security through early warning; we can better integrate environmental considerations in economic policy; we can better coordinate legal instruments; and we can realize a vision of a world without slums.

The Secretary-General of the United Nations articulated this feeling very aptly when he said, "the year 2000 constitutes a unique and symbolically compelling moment for member States to articulate and attain an animating vision for the United Nations in the new era." The Millennium Summit of the fifty-fifth session of the United Nations General Assembly provides a unique opportunity to address at the highest level the role of the United Nations in the field of sustainable development.



Klaus Töpfer

United Nations Environment Programme, PO Box 30552, Nairobi, Kenya. 254-2-621-234, fax: 254-2-226890
Website—http://www.unep.org

*** For more information, please see these websites:**

The Global Environment Outlook 2000 — http://www.unep.org/geo2000/index.htm)
The "Malmo Declaration" — http://www.unep.org/malmo/malmo_ministerial.htm)
Rio Principles —
(http://www.unep.org/documents/default.asp?documentid=78&articleid=1163)
Universal Charter of Human Rights — http://www.un.org/rights/50/decla.htm)

Building a Sustainable World

by [illegible] Environment Department

The protea is South Africa's national flower occurring in the Fynbos of the Cape Floristic Province.

As we look back over the past years and ahead to the new millennium, we see reasons for both distress and hope for the future. Environmental trends on the ground, especially in the developing world, remain alarming. Driven by population growth and rising production and consumption, pressures on natural resources continue to increase. At the same time, public awareness of the risks of environmental degradation is growing, and there are signs that a new working partnership—government, business, and civil society—is emerging for the promotion of sustainable development.

Can the environment wait?

The last decade has brought incredible advances in technology and communications, but failed to turn around negative trends in the environment, especially in the developing world.

- Global population is now about 6 billion and is heading for 7 billion by 2014. Of that extra billion, only 30 million will be in the world's high-income countries. More than half of the next billion will come from South Asia (310 million) and Sub-Saharan Africa (240 million). The next billion people will be primarily urban, concentrated in areas of current population settlement, and particularly in environmentally stressed seacoasts and river valleys.
- While environmental health risks are greatly reduced in the developed world, they still cause nearly 20 percent of the burden of disease in the developing countries. The causes include lack of access to safe drinking water, high levels of indoor and outdoor air pollution, unsafe use of agro- and industrial chemicals, and vector-borne diseases (malaria, dengue fever) linked to environmental problems.
- Natural resources are under great pressure. About 20 countries, primarily in the Middle East and Africa, are

classified as water-scarce or water-stressed. Forests are disappearing at a rate of about 100,000 square kilometers per year. Nearly 70 percent of the world's fisheries are overexploited. Soil degradation affects more than 900 million people in 100 countries, and about 1.1 billion rural people are at risk from desertification and dryland degradation.

- Natural and man-induced disasters, which have often been front-page news in the last couple of years, maintained their high frequency. In Bulgaria, my native country, unprecedented heat waves caused widespread forest fires. Globally, disaster losses increased from $71 billion in the 1960s to $608 billion in the 1990s. The average costs of natural hazards as a proportion of GDP are 20 percent higher in developing countries than in developed countries, suggesting that lagging development and poverty tend to greatly amplify their impacts. If these short-term climate variations are actually related to long-term climate change, they provide terrible examples of what the future might look like if the world fails to curtail its carbon dioxide emissions.

Almost as shocking as these environmental horror stories is our abysmal ignorance of what we are doing to the world's ecosystems. *World Resources 2000–2001*, in which the Bank is a partner, tries for the first time to gauge the health of the world's croplands, forests, coastal areas, freshwater systems, and grasslands. (For a brief summary of the results, see the inside front cover.) This Pilot Analysis of Global Ecosystems will be followed by a more comprehensive Millennium Ecosystem Assessment, which is already under way.

Building a sustainable world

The most fundamental environmental management constraint the world faces is not lack of resources, but lack of leadership. During the past year, the most vocal voice for the environment came from the citizen on the street, notably in Seattle and Washington. The globalization debate has focused environmental activism and brought it to the fore in the media and around the conference table. Environmental activists have put a healthy heat on multilateral organizations, including the Bank, to intensify our efforts to develop better tools for global environmental governance.

Apart from activists, the general public increasingly supports strengthened environmental management. Sample surveys around the world show there is a clear consensus for stronger environmental laws and regulations, which provides hope that stronger political leadership on the environment may emerge (see *Box*, page 8). Since the United Nations Conference on Environment and Development at Rio in 1992, civil society has matured and today plays an integral part in the governance process; important decisions now require wide consultations with stakeholders. As part of this process, the Bank has built solid working relationships with many development NGOs and worked to maximize stakeholder participation in Bank projects.

The role of business has also increased. There is a legitimate demand from communities, employees, and consumers that the business community should take on social and environmental responsibilities on a par with their growing role in the economy. On the corporate side as well, more environmental and social responsibility is emerging. In their recent report on *Meeting Changing Expectations: Corporate Social Responsibility*, the World Business Council for Sustainable Development and its members have responded positively to the increasing calls for business to assume wider responsibility in the environmental and social arenas. The Bank's International Finance Corporation is playing a lead role in this effort, as described in this issue, and the Bank itself is actively working to facilitate sustainable private-sector development.

In this redefined stakeholders triangle, governments, both nationally and globally, need to adjust to new divisions of accountability and power, while retaining their critical role in providing a level playing field for all and ensuring that the rules of the global economy are just and the benefits are inclusive. Similarly, international organizations, which used to be a forum for governments, need to adapt to these changing realities, and may emerge with new mandates and functions. As part of this debate, in this issue we have asked two distinguished experts—Daniel Esty and Calestous Juma—to discuss the pluses and minuses of creating a new global environmental organization.

The role of the Bank

In this context, what are the key contributions the Bank can make to help build a more sustainable world? As a development institution, our overarching concern is not lending more money, but helping countries make the policy and institutional choices that benefit poor people most and facilitate equitable and sustainable growth.

First, the Bank supports a long-term view of development. We must be careful not to fund initiatives that bring people out of poverty today, only to put them back into poverty within a generation be-

PUBLIC OPINION ON THE ENVIRONMENT

Sample surveys of public opinion on the environment in 30 countries have found relatively high levels of concern in most countries, but somewhat different perspectives between the more affluent countries of North America and Europe and developing nations.

In China, 40 percent of respondents mentioned the environment as among the nation's most important problems. Other countries where the environment is named by 15 percent or more included Australia, Finland, Germany, Great Britain, India, Japan, Korea, Kazakhstan, and Russia. In eight countries mention of the environment has increased since 1992; in seven, it has decreased.

There is a clear consensus among citizens around the world that environmental laws and regulations, as they are now applied in their countries, do not go far enough. Majorities of people take this view in 27 out of 30 countries surveyed.

The survey found significant differences in priorities between countries with higher and lower per capita income. In countries where purchasing power is high, people are overwhelmingly most concerned about the effects of pollution on the world as a whole. In the 10 countries with the highest per capita purchasing power, 68 percent are most concerned about environmental effects on the world as a whole. This proportion drops to 52 percent in countries with medium purchasing power and 39 percent in countries with the lowest per capita purchasing power.

In wealthier countries, people tend to take a more long-term and global view of environmental pollution. Since national and local pollution laws are more stringently enforced, concerns about local air and water pollution are more muted. In poorer countries, the survey found that environmental concerns are often much more immediate and focused on such issues as the safety of local water supplies and air pollution from local factories.

The findings of the 1998 Environmental Monitor survey are based on interviews with about 1,000 citizens in each of 30 countries on all continents. The survey was managed by Environics International Ltd., which was assisted by research institutes in many of the survey nations.

Source: Environics International Ltd. 1998 *The Environmental Monitor: Global Public Opinion on the Environment* Toronto

cause we did not foresee the long-range depletion of natural capital. Overcoming the shortsightedness of political and business institutions is a key challenge of sustainable development. This is also a challenge for the Bank. It requires raising the Bank's planning horizon to reflect long-term environmental concerns.

Second, the Bank can help countries manage the environmental risks of economic development. Internally, the Bank should support better environmental assessments; improved design of projects, policies and programs; and monitoring and improving the environmental performance of its own projects. Externally, it should help build the environmental capacity and performance of developing countries.

Third, the Bank can help markets work for the environment, not against it. This requires support for environmental policies, regulations, and enforcement to ensure that environmental externalities (both negative and positive) are internalized, and that new markets are created to service the needs of the environment. As described in an article in this issue by Stefano Pagiola, the Bank is assisting several countries in developing systems of payments for environmental services.

Fourth, the Bank must continue to make the case for and support good environmental governance. Modern societies are increasingly complex. They cannot function effectively and sustainably in the absence of an equitable legal framework based on a consensus of opinion within the community and a competent and impartial civil service to administer the law. In their absence, both local and foreign capital are unlikely to be sufficient to fund environmental services and fuel the engine of growth.

Fifth, the Bank must promote partnerships and participation. We can go a lot further by increasing the participation of affected people in the decisionmaking and development process. The Bank can also multiply the effectiveness of its assistance if it works in partnership with others toward common objectives. Development agencies, bilateral donors, civil society, the private sector, and others can work together to bring positive environmental outcomes on the ground. Partnerships allow selectivity and increased effectiveness based on the comparative advantages and relative strengths of each partner.

Sixth, the Bank can promote international and global environmental policy dialogue,

help raise awareness, and build consensus. The Bank assists developing countries to implement international conventions and can facilitate effective resource transfers from the developed to the developing world for measures with regional and global benefits. Moreover, we can make the case that well-targeted interventions in environmental management and pollution control can leverage both local and global benefits. We have an important role to play in facilitating communication between developing and developed nations, so they can better understand each other's priorities and unite them in a common environmental agenda.

Investing in sustainable development

We are striving to ensure that our analytical work and investment operations fit these broad objectives. We have a total of 97 stand-alone environmental projects totaling about $5.1 billion, and a large number of sector projects with primarily environmental objectives amounting to $10 billion (this portfolio is described in more detail in the article that follows; many of these projects also are described in the regional reviews in this issue).

Important lessons have been learned in recent years. For example, in natural resources management, community-based forest management can successfully target the rural poor. In the water resources area, we see success in efforts to promote regional and national water resources planning programs. The Bank is also taking an active role in assisting nations to reduce their vulnerability to natural disasters.

We are also working with our clients on global environmental issues, such as the phaseout of ozone-depleting substances, biodiversity conservation, greenhouse gas reduction, and protecting international waters. Two innovative programs—the **Critical Ecosystem Partnership Fund** (see page 60), which focuses on biodiversity, and the **Prototype Carbon Fund** (see pages 58–59), which focuses on carbon markets—are just getting under way.

Toward a new environment strategy

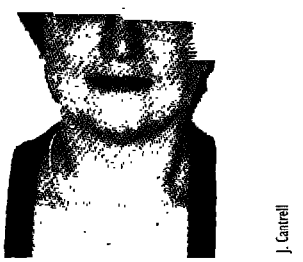
While the Bank has evolved as one of the international organizations committed to environmentally and socially sustainable development, we still have a long way to go to mainstream environment in all aspects of Bank operations. For the environmental community of the World Bank, the recognition of the challenges ahead has triggered the preparation of a new environment strategy that will better align management of the environment and natural resources with poverty reduction and sustainable growth. The key development objectives of the strategy are to:

- Improve people's health by reducing their exposure to environmental risks such as indoor and urban air pollution, water- and vector-borne diseases, and toxic substances.
- Support the sustainable management of natural resources—land, water, forests, and biodiversity—to enhance poor people's livelihoods today and in the future.
- Reduce people's vulnerability to environmental risks such as natural disasters, severe weather fluctuations, and the impacts of climate change.

Extensive consultations on the new strategy with clients and partners are under way; a final draft of the strategy is expected by early in the next calendar year.

This new strategy will (a) outline an agenda of high-priority areas where there is a strong potential for impact on the local, regional, and global levels; (b) build awareness and understanding of poverty-development-environment links among the Bank and client countries; (c) begin to define long-term goals and short-and medium-term performance benchmarks, which shift the focus from inputs and processes to outcomes and provide a transparent basis to evaluate the World Bank's environmental performance; and (d) promote a long-term partnership with client countries and other donors.

We hope the new strategy will drive a strong environment agenda in the Bank and fully integrate it in our development mission. Our goal is to reach Rio +10 as a leader on sustainable development, with a proven commitment to seek out the institutions, the government officials, the intellectuals, and others who are concerned about environmental issues and make their voices matter in defining the policy and investment decisions of the World Bank.



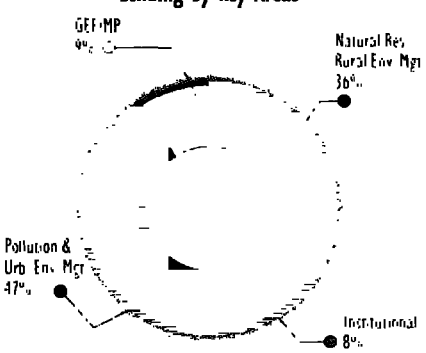
J. Cantrell

Kristalina Georgieva is the Director of the Environment Department for the World Bank and the first developing country national (Bulgaria) to hold the position.

Mainstreaming the Environment — Progress in Greening the Bank's Portfolio

Over the last several years, the World Bank has been using its investment portfolio and technical assistance to strengthen the integration of environmental issues into the development process. In addition to environmental assessment procedures and targeted environmental interventions, the Bank is now moving toward greening its entire portfolio through a growing number of sector projects, which include environmental components or incorporate environmental considerations into project design.

Distribution of Targeted Environmental Lending by Key Areas



Environmental portfolio

At the end of fiscal 2000, there were 97 active environment projects amounting to $5.16 billion. In addition, there were numerous sector projects with primarily environmental objectives amounting to $10 billion. This "broad" environmental portfolio, which totals $15 billion in lending, consists of projects with clear environmental objectives in the area of pollution management and urban environmental priorities, natural resource management, environmental capacity building, and global environmental issues.

In fiscal year 2000, 13 new environment projects were approved, totaling $515 million. In addition, there were over 30 new projects in other sectors with primarily environmental objectives amounting to over $1 billion. Thus, environmental lending for projects approved in fiscal 2000 amounts to almost $1.6 billion. This accounted for 10 percent of total Bank lending in fiscal 2000 ($15.3 billion).

Greening the Bank's portfolio

Environmental Assessments. All Bank projects have to be screened for potential environmental impacts. This requirement has helped to minimize potentially negative environmental impacts of Bank projects. Over the period from 1990 to 2000, 210 projects—about 14 percent of the Bank's lending portfolio (by lending amount)—were classified as Category A, which requires a full environmental assessment. Another 1,004 projects—about 35 percent of Bank lending—were classified as Category B, requiring a more targeted or limited environmental analysis. The rest of the portfolio (51 percent) had no environmental impact, and therefore required no environmental analysis.

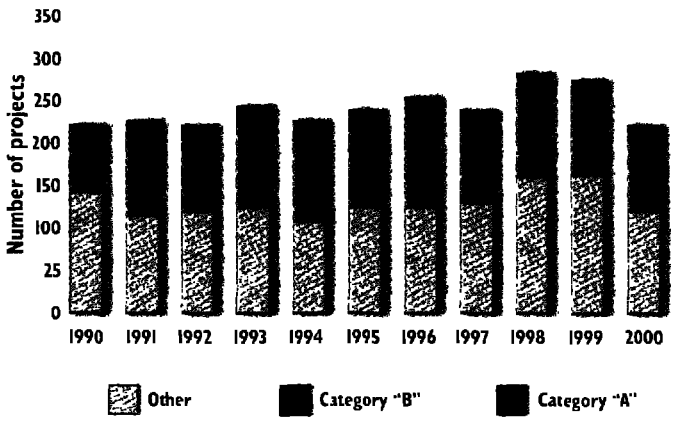
In fiscal 2000, of the 223 new Bank projects, 18 were classified as Category A and required a full environmental assessment. This represents 15 percent of all new projects, or $2.3 billion in lending. An additional 82 projects—31 percent of all new projects, or $4.8 billion in lending—were classified as Category B and required a simpler environmental analysis.

Mainstreaming the environment

In addition to the portfolio of projects targeted specifically at improving environmental management, a growing number of other sector projects include environmental components or incorporate environmental considerations into the project design. As described below, there are many examples in sectors such as rural development, urban development, water supply and sanitation, and energy.

Rural Development. In the Bank's portfolio of agriculture and rural development projects, increas-

All Bank Projects, by EA Category, 1990-2000



ing emphasis is being given to sustainable land resource management through appropriate soil and water conservation measures.

Irrigation and drainage projects are focusing on improved water resources management measures that address problems of water scarcity, water quality, and salinity; examples include the **Ceara Integrated Water Resource Management Project** in Brazil and the **Water Sector Investment Project** in Tunisia. In Georgia, the **Agricultural Research, Extension, and Training Project** promotes the adoption of technologies that increase sustainable agricultural production and reduce pollution of natural resources.

Urban Development. Several urban projects have focused on improving environmental services. For example, the **Sichuan Urban Environment Project** in China is a comprehensive urban environmental services improvement program designed to reduce degradation of water and land resources; provide an adequate supply of safe water to Sichuan's growing urban population and economy; and maintain the water quality of the Yangtze River.

In Bhutan, a component of the **Urban Development Project** will support the development of environmental guidelines for the urban sector, as well as environmental codes of practice regarding solid waste management.

Water supply and sanitation. The Bank's portfolio of water supply and sanitation projects focuses on expansion and upgrading of water supply and sewerage systems. Most of the 15 projects approved this year have primarily environmental objectives.

In China, the **Hebei Urban Environment Project** will support Heibei Province in implementing a long-term urban environmental services improvement program to recover from the environmental degradation of its water and land resources, provide an adequate supply of safe water, and ensure sustainability of delivery. In the Dominican Republic, the **Wastewater Disposal in Tourism Centers Project** will apply innovative technology for environmentally sound disposal of treated wastewater in coastal towns. The **Tehran Sewerage Project** in Iran will finance the installation of wastewater collection and treatment facilities in order to improve public health. The **Second Community Water and Sanitation Project** supports the Government of Ghana in extending sustainable water and sanitation facilities to 85 percent of the rural population by the year 2009 and in establishing a sustainable operations and maintenance system in rural communities and small towns.

Energy. Many Bank energy projects are promoting energy efficiency through institutional and pricing reforms, as well as demand-side and supply-side energy efficiency components. For example, the **Kiev Public Buildings Energy Efficiency Project** will support the Ukranian government's energy conservation program through energy efficiency improvements in institutional buildings. The **Second Renewable Energy Project** in India aims to promote energy efficiency and demand-side management (DSM) investments.

The Bank is also supporting cleaner energy alternatives such as natural gas, as well as renewable energy sources such as solar, wind, and geothermal power. The **Podhale Geothermal District Heating and Environment Project** aims to reduce air pollution from local coal-fired space-heating boilers through the increased utilization of geothermal heat and natural gas in the Podhale region of southern Poland.

Future challenges

Looking toward the future, the Bank will continue its effort to mainstream environmental issues into the entire Bank portfolio. There are several priority areas, including the need to (a) identify indicators that can measure the environmental outcomes of Bank projects; (b) continue to mainstream environmental components into all Bank projects; (c) do more cross-sectoral work, which can identify ways to build in local and global environmental benefits in Bank projects; (d) intervene at an earlier stage in project preparation to identify potentially adverse environmental impacts; (e) use environmental assessments more strategically; (f) sharpen the Bank's ability to identify environmentally preferable alternatives in projects; and (g) better integrate environmental considerations into Country Assistance Strategies, Poverty Reduction Strategy Papers, sectoral strategies, and the Comprehensive Development Framework.

This article was prepared by Anjali Acharya of the Environment Department, (202) 458-5298, fax (202) 477-0565.

International Governance at the Global Level

A forest fungus in the biodiversity-rich Andries Vosloo Kudu Reserve, South Africa.

Many of the critical environmental issues facing the world are either truly global in nature, such as climate change, or rise to the level of global importance, such as loss of biodiversity and management of large water systems. There are numerous conventions and other international agreements addressing such problems, frequently developed under the auspices of the United Nations Environment Programme or other parts of the UN system. The reality is, however, that progress on dealing with these global issues is often slow, despite the resources provided through bilateral aid or multilateral facilities such as the Global Environment Facility (GEF) or other agencies. The recent Malmo Declaration from the world's environment ministers stressed the need for reinvigorated international cooperation based on common concerns and a spirit of international partnership and solidarity.

An underlying concern about globalization is that the environment and social dimensions of increasing trade, investment, and exchange of ideas are not given sufficient weight or attention in international affairs. In this context, some have suggested creating a global environmental organization or agency with some form of regulatory or enforcement capability. This new agency, which has received some high-level support recently, is sometimes mentioned as a potential counterpart to the WTO.

The possibility of such an organization has considerable relevance for the Bank's clients, given the efforts that are being made by the Bank and others to support strengthening of national regulatory and compliance capabilities. In the pages that follow, two distinguished and informed commentators, Daniel Esty and Calestous Juma, provide contrasting viewpoints on this issue.

This is an issue for governments to decide; the Bank itself has no position. No matter how the discussions on an international agency evolve, there is a clear need to continue to build leadership and support for responsible management of key environmental issues at the international level, as articulated by UNEP's Malmo Declaration.

The Value of Creating a Global Environmental Organization

Daniel C. Esty

Global efforts at environmental protection are bogged down in part because of a weak institutional structure. It is time to get serious about revitalizing the international environmental regime and to consider creation of a Global Environmental Organization (GEO).

The suggestion that we focus first on strengthening national-level environmental programs misses the point. A significant number of pressing pollution control and natural resource management issues are transboundary in nature and cannot be adequately addressed by domestic environmental laws and projects. Moreover, in the context of a globalized economic structure and multinational corporations, national governments cannot address the challenges that exist on their own. Basic economics teaches that public goods must be provided at the scale of the issue to be addressed. When problems are worldwide in scope—from a thinning ozone layer to possible climate change to depleted fisheries in the oceans—the response strategy must be constructed at the same scale.

There is no reason a new Global Environmental Organization would need to be a big bureaucracy. The best approach to revitalizing worldwide environmental protection efforts would start by consolidating a number of existing UN agencies with environmental responsibilities into a streamlined new body with a decentralized (and largely virtual) structure that draws significantly on outside expertise (NGOs, academics, and the business community). When it comes to global environmental governance, we know that "less is more." In fact, one of the UN Environment Programme's core problems is that it tries to do too much. It should quit being a program agency and narrow its focus to fostering collaboration on issues that are inescapably international.

Fragmentation of responsibilities, funding, priorities, roles, actors, and geographic locales is a central weakness of the current environmental regime and leads to environmental initiatives that are less coherent, effective, and systematic than needed. Beyond the competition between UNEP and the Commission on Sustainable Development (CSD), there are a series of environmental treaty secretariats (Biodiversity in Montreal, Climate Change in Bonn, Hazardous Waste in Geneva) that compete for

The Perils of Centralizing Global Environmental Governance

Calestous Juma

Advocates of a new Global Environment Organization (GEO) allege that global efforts to protect the environment are stalled in part because of weak institutional structures. They speculate on the significance of institutional problems and provide no evidence to support the view that environmental conservation will be improved through the creation of a new United Nations agency. A viable proposal for a new agency requires a clear and compelling organizing principle, credible design concept, and realistic implementation plan. They offer none of these. Instead, they rely largely on arguments based on administrative efficiency.

First, they attribute lagging global environmental efforts to the fact that environmental tasks are fragmented and performed by too many uncoordinated agencies and treaties. Second, they bemoan the lack of enforcement mechanisms in most existing treaties. Third, they say the agency would help transfer environmental technologies and finances to developing nations. And finally, they appeal to the need for a body that would serve as a counterweight to WTO. None of the reasons has a sound basis.

It is true that transboundary environmental problems—all of which have national sources—require concerted international action. This is already being done through a number of international treaties and organizations. A new agency will not replace existing efforts but will add another layer of bureaucracy to an already complex network of treaties and organizations.

Here are a few examples. Acting against global warming requires national action to meet commitments under the Kyoto Protocol; a new agency will add little to this process. Setting standards on marine pollution should build on the work of the International Maritime Organization. Setting environmental standards for products should be guided by the pioneering work of the International Organisation of Standards. Promoting guidelines for ecosystem management should support the work already initiated under the Convention on Biological Diversity. Environmental impact assessment activities in institutions such as the World Bank should be given greater legislative authority. There are numerous other efforts that need to be supported and strengthened, not denigrated.

The assertion that consolidating existing international organizations and secretariats of conventions will result in a stronger

VIEWPOINTS

The Value of Creating a Global Environmental Organization (continued)

resources and attention. In addition, there are more that a dozen other international bodies, such as the UN Development Programme (UNDP), the World Bank, the World Meteorological Organization (WMO), and the Global Environment Facility (GEF), that play some role in international environmental protection. These wide-ranging efforts are now poorly coordinated. There is little effort made to set priorities systematically or to ensure budget rationality, never mind achieve the full range of synergies that should be possible.

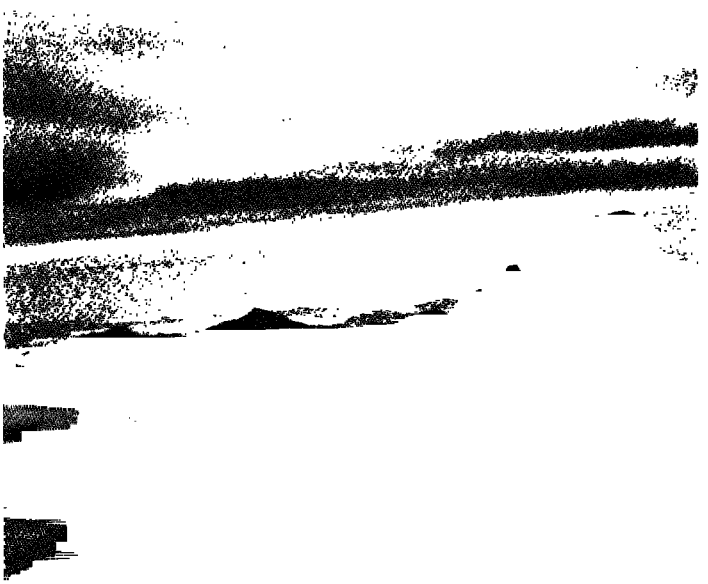
The concerns addressed by these many bodies is diverse. But the response to the diversity need not be disorganization. A carefully constructed institutional design that offers a coherent and comprehensive response to worldwide environmental problems has much to recommend it.

Dissipation of focus, competition for limited resources, bureaucratic infighting, and poor coordination among the core environmental bodies, which stretch from Nairobi to New York, squanders already limited resources. Thinly staffed developing countries in particular cannot keep up with the sweep of environmental entities, meetings, and activities spanning the planet. Consolidation of the range of international environmental programs in a single city, combined with a decentralized structure of support, would greatly enhance efficiency and multiply the opportunities for learning across issues. Climate change strategists, for example, may well find strategies for better coordinating worldwide efforts to combat greenhouse gas emissions in the ozone layer protection experience. There are, moreover, real synergies to be obtained by linking related issues and initiatives.

One of the most urgent reasons for establishing a Global Environmental Organization is to relieve the stress on the WTO that arises every time the latter reaches beyond its core trade competence to take up issues in the environmental domain. Integrating economic and environmental policies represents a critical challenge. But however desirable, a "greener" GATT is no substitute for a functioning international environmental regime.

The call for a Global Environmental Organization—which has come from French Prime Minister Jospin, French President Chirac, former WTO Director General Renato Ruggiero, *The Economist* magazine, and many others—stands out as an effort to make sense of the realities of globalization. The underlying logic is crystal clear: we need to find thoughtful ways to manage our ecological interdependence. Without a concerted effort to address transboundary pollution spillovers systematically and to utilize the shared resources of the global commons responsibly—or as economists would say, to internalize externalities —we risk market failures in our international economic exchanges, reduced gains from trade, and diminished social welfare, not to mention environmental degradation.

The existing international environmental regime is listing badly and cannot be righted. It is time to design a new, sleeker, and more efficient craft that can get us where we need to go. The "Rio+10" Conference contemplated for 2002 would be a good target launch date.



K. Mackinnon

Mountain range, Irian Jaya.

Daniel C. Esty *is a professor of environmental law and policy at the Yale Law School and the Yale School of Forestry and Environmental Studies. He is also Director of the Yale Center for Environmental Law and Policy and Associate Dean of the Yale School of Forestry and Environmental Studies.*

and more effective agency is based on a misunderstanding of how international bodies function. Secretariats of conventions and international bodies receive their instructions from their governing bodies. Administrative efficiency should not be confused with programmatic coherence. Secretariats of conventions cannot be combined without the approval of their respective governing bodies. Advocates of the new agency have not indicated how they plan to deal peacefully with the divergent governing bodies.

The perceived competition for finances is in part a result of the failure by many governments to pay their dues, which is often prompted by concerns over bureaucratic inflation. There is no evidence that the situation will be different under a new organization. Furthermore, many of the agencies dealing with environmental issues focus on distinct but complementary functions that should not be collapsed under one behemoth.

But more importantly, environmental problems are diverse in character and require specialized institutional responses. Where coordination is needed, governments can do that without creating a new bureaucracy. There is, however, an urgent need to share experiences and lessons, codify principles, promote guidelines, and set new standards. But this is just what global treaties on climate change, biological diversity, endangered species, and control of desert growth were created to do. Many of them are already doing this without the perils of centralization.

It is true that most environmental agreements lack effective enforcement mechanisms. One of the reasons is that governments cannot agree on how they should work. Drawing on their experiences with the World Bank and the International Monetary Fund, many developing countries are concerned that a new environmental agency would only become another source of conditions and sanctions. What is needed is greater support for research, training, education, and public awareness in developing countries in keeping with the Earth Summit commitments.

More needs to be done at the national level. If governments promote greater compliance with domestic environmental laws, they will find it easier to reflect this in global efforts. What is perceived as deficient global environmental regulations is really an indication of poor domestic housekeeping.

Most developing nations cannot meet their obligations under various environmental treaties. They say this is partly because the richer nations have not honored their commitments to assist them with technology and finances. There is no guarantee that the new agency will perform better in this regard.

In addition, developing nations have consistently argued that environmental conservation should be promoted as part of their overall economic goals, as agreed at the 1992 Earth Summit in Rio de Janeiro. Creating a new agency focusing on environment over development, as is proposed, would amount to reneging on this historic agreement and will antagonize developing countries.

The claim that a new agency would serve as a counterweight to the WTO is fundamentally flawed. The WTO undoubtedly needs to take environmental issues seriously. WTO's Committee on Trade and the Environment needs to be strengthened, and environmental treaties should have umbrella observer status in the organization. This will help to contribute to the appropriate integration of environmental considerations into the functioning of the WTO. Deciding on how to deal with the workload in the WTO is a matter that is internal to the organization and cannot be solved through a separate regime.

Unfortunately, the debate on creating a new agency diverts attention from more urgent tasks. All nations need to do more to meet their obligations under international treaties and must do this without delay. Much of this involves domestic efforts to cut pollution, protect wildlife, conserve soils and freshwater, and promote investment in environmentally sound technologies. Industrialized nations should also meet their international commitments by sharing experiences and forging technology partnerships with developing nations.

Arguments for a new agency that are based on administrative efficiency point to an urgent need to improve the functioning of existing bodies, not create a new one. Tackling the world's environmental problems calls for urgent action, especially at the national and local levels. There is no time to waste on launching a costly, politically divisive and bureaucratic structure with no compelling organizing principle, clear design concept, or realistic plan.

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IFC

Corporate Citizenship in a Globalized Economy —

IFC's Role in Promoting Sustainable Private Sector Investment

Globalization presents historically unique challenges—and opportunities—for the private sector and the goal of sustainable development. The recent protests in Seattle and Washington DC underscore a growing recognition of the issues by civil society, business, governments and international agencies. If globalization of the economy is to bring sustainable development more must be done to promote the globalization of social and environmental governance.

For the private sector, this presents a complex and challenging new paradigm particularly to companies that do business in the developing world, whether they are local enterprises or transnational corporations.

The traditional balance of power between corporations and governments has changed and business therefore has to come to grips with new definitions of corporate responsibility. Corporate environmental and social values have to be redefined alongside traditional values such as profitability, and integrated even more deeply into the heart of strategic thinking and everyday practice. Rapid communications in the "global village" mean that companies' environmental and social performance is under ever-greater scrutiny from an ever-widening audience of stakeholders. In turn, this acts as a driver for new models of assurance, accountability, and partnership. Multinational operations and the demands of the global customer mean that national regulatory systems alone can no longer provide the sole basis for corporate environmental and social management; global standards of best practice are also needed, and these must combine international credibility with local practicability.

IFC/World Bank

Senior managers from banks and investment funds receive training on environmental and social risk management through IFC's Competitive Environmental Advantage Workshop, delivered by the Environment Division's Financial Markets Unit.

IFC's leadership role

The International Finance Corporation (IFC) has an important opportunity and responsibility to help address these vital issues. As the World Bank's private sector investment arm, IFC has established a leadership role in the drive for sustainable and equitable private sector investment in the developing world. We are committed to promoting sustainable projects in our developing member countries that are economically viable, financially and commercially sound, and environmentally and socially responsible.

Global standards and best practice

IFC's environmental and social policies and guidelines have been developed after extensive peer review and draw on best practice and experience across a very wide range of disciplines. Not only do they provide a rigorous framework for IFC's own investments: they are increasingly being seen—and used—as a model of best practice for the private sector generally, even where IFC has no direct role.

IFC will continue to play an important part in the development of global standards and best practice. We view this as a significant development role for IFC. Our dialogue with other multilateral organizations, governments, and export credit agencies forms an important part of this activity. During the past year, IFC has played a key role with other international financial institutions to map out the environmental and social requirements of each organization, with the long-term goal of moving toward a common set of core principles for environmentally and socially sustainable global development finance.

Mainstreaming environmental and social issues

All IFC projects are carefully reviewed and monitored to ensure that they meet acceptable environmental and social standards. Increasingly, however, we are seeking to move beyond this "do no harm" philosophy. Project sponsors are now routinely encouraged to consider broader environmental and social goals that go beyond immediate mitigation measures, such as pollution control equipment. An example is Favorita Fruit Company in Ecuador, whose subsidiary Reybancorp recently became the first banana grower in the world to receive the Rainforest Alliance certification of complete compliance with rigorous environmental and social standards.

Roughly 40 percent of IFC's development funds are now delivered via financial intermediaries such as banks and private equity funds. We work closely with them to ensure that the projects they finance meet applicable environmental and social standards. But IFC's capacity-building goal goes further than this: we also help them to integrate environmental risks into their investment analysis, and to consider environmental and social issues as an opportunity for competitive advantage and added-value. For example, an IFC-backed private equity fund in Chile has been able to help one of its portfolio companies (a juice and wine producer) to include pollution control and eco-efficiency measures in its expansion and modernization program. Not only does it now comply with Chilean EHS regulations, but the company is now aiming to have an ISO 14000 environmental management system covering its plants and suppliers.

Favorita Fruit Company, Ecuador

IFC has been an investor in Favorita and subsidiary companies since 1992. This includes a $15 million investment in 1998 in Reybancorp, Ecuador's second largest banana producer. The project centers on the modernization of the company's existing seaport facility and expansion of its banana plantations and production infrastructure. The project was subject to detailed environmental, social, and technical evaluation by IFC specialists, and mitigation measures were developed and agreed. In June 2000, Reybancorp became the first banana grower to receive certification under the Rainforest Alliance's "Better Banana" project. The scheme focuses on environmental protection, labor standards and working conditions; and sustainable farm management practices such as pesticide use. Certification requires independent audits against a rigorous framework of 200 criteria. "When we first obtained financing from IFC, the environmental standards seemed like an obstacle, but we realize now that they have helped us build a strong business," said Rafael Wong, Executive Vice President of Favorita. "And in five years from now, there will be no access to international markets for companies that do not show this respect for the environment. It is becoming fundamental to international trade."

Innovative projects

IFC also invests in projects with specific environmental and social benefits. For example, IFC finances projects ranging from renewable energy to clean water supply using its own resources as well as concessional funding from sources such as the Global Environment Facility (GEF). IFC has a catalytic role in supporting smaller market-oriented environmental projects through facilities such as the innovative IFC/GEF Small and Medium Enterprise Program. Looking to the future, IFC will continue to pursue new ventures, such as projects that mitigate climate change pursuant to the Kyoto Protocol—including potential opportunities to develop funds that invest in greenhouse gas emissions reduction.

IFC is also seeking to expand into new and innovative sectors such as private-led health and education. For example, in Kenya, IFC has helped an entrepreneur to provide private health insurance to employees of local businesses. But the company's development impact hasn't stopped there. It has also built health clinics and services for low-income communities, providing services such as HIV/AIDS testing and counseling. This IFC investment has helped to improve the lives of numerous Kenyans and has an important demonstration effect for other entrepreneurs in the health and social services sectors.

Taking on the challenges

One of the responsibilities of leadership is to take on chal-

IFC/GEF Small and Medium Enterprise Program

Using $21 million provided by GEF, the IFC/GEF Small and Medium Enterprise Program has been designed to address needs in two key areas: climate change (renewable energy projects or projects that remove barriers to energy conservation or energy efficiency) and biodiversity (those promoting sustainable use or conservation of natural ecosystems). Institutions interested in participating as intermediaries apply directly to the EPU and can receive up to $1 million in long-term loans for on-lending to eligible subprojects. Since 1995, 19 subloans have been approved, encouraging innovative environmental initiatives by SMEs in all regions. For example, in Mexico, an innovative partnership with Conservation International and Starbucks is slowing deforestation in the Chiapas region by helping poor farmers find a market in the United States for their shade-grown coffee; in Papua New Guinea, an environmentally friendly sawmill backed by the World Wildlife Fund buys logs from indigenous people, supporting sustainable community-based forestry.

lenging projects, for example in sectors such as oil, gas, and mining. Recently, IFC and the World Bank Group received much attention and criticism due to our review and eventual approval of the Chad-Cameroon oil pipeline project (see page 32). The Chad-Cameroon pipeline involves a more complex partnership than most, but is a stark illustration of how our involvement can be essential to ensuring that investments in challenging sectors are not only financially sound, but environmentally and socially responsible as well. That is our added-value component.

Projects such as Chad-Cameroon illustrate the importance of listening and learning from all actors in the development process. Often, the issues are complex and decisions are difficult. Consensus is not always possible and, as in this case, IFC and its project sponsors must be as attentive to a project's strongest critics as we are to its supporters.

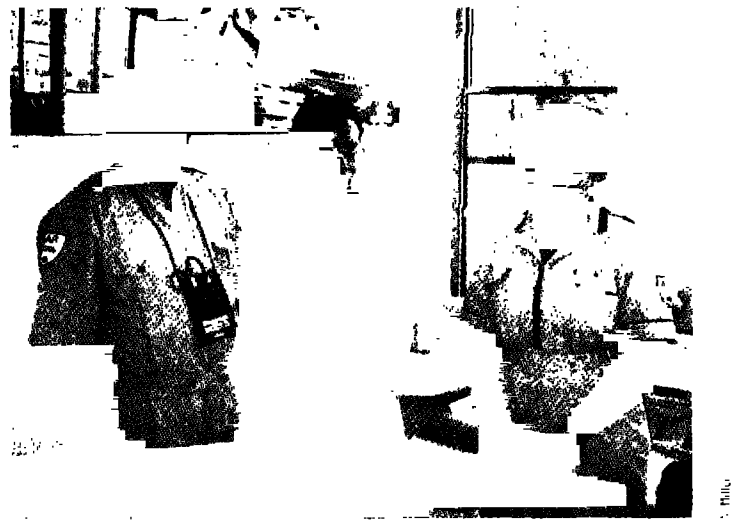
The concept of corporate citizenship must include a recognition that organizations have certain rights to make carefully informed decisions on such difficult issues. However, this must be balanced by corporate responsibility, including a commitment to transparency, openness, and public accountability. These are principles that IFC takes very seriously, as evidenced by the appointment in July 1999 of the first ever IFC/MIGA environmental and social Compliance Advisor/Ombudsman, Ms. Meg Taylor.

New directions

During the past year, private sector activities in the World Bank Group have been brought under one management structure to improve the enabling environment for private sector development and to increase synergies between the Bank's private sector regulatory and policy activities and IFC's investment activities. As part of this process, IFC is re-aligning itself and has formulated new "strategic directions" in areas where we already have a demonstrated competitive advantage and role.

In particular, we have identified the need for IFC to have greater involvement and leadership in sustainable development. This is underscored by a clear management commitment to move IFC toward a more holistic framework for development, recognizing that economic, social, and environmental progress are interdependent. We are currently engaged in a strategic review to redefine our vision of IFC's roles and responsibilities in sustainable development, and to map out how IFC and its partners should move towards this "triple bottom line" approach.

Globalization means managing change and we, as much as anybody, must continue to learn, innovate, and influence if IFC is to achieve its goal of poverty reduction through environmentally and socially responsible private sector investment.



This article is based on the contribution of Peter Woicke, Executive Vice President, IFC and Managing Director, Private Sector Operations, World Bank Group, to the UN Millennium Summit 2000. It has been prepared with input from Dan Siddy of IFC's Financial Markets Environment Services Unit (202) 458-7652, fax (202) 974-4384, and Shawn Miller of IFC's Corporate Relations Unit (202) 473-1404, fax (202) 974-4384.

Environmental and Social Safeguard Policies

Making progress but room for improvement

The World Bank in fiscal 2000 continued its effort to improve the application of its environmental and social safeguard policies, which are designed to protect those who might be adversely affected by Bank-funded operations and to ensure that projects do not cause unacceptable harm to the environment.

For the past decade the Bank has been continually working to improve the coverage and application of its safeguard policies. A review of experience with the Environmental Assessment process in 1997 noted that considerable progress had been made over the previous five years, while weaknesses remained. More recently compliance with safeguard policies has been made an integral element of the Bank's internal quality assurance processes for both quality at entry and supervision, with lessons learned from these reviews being used to improve performance by the Regions. These assessments have shown that the overall quality of the Bank's portfolio continues to improve and that the environmental and social dimensions are as good as or better than other aspects of Bank projects, although implementation and supervision are still a concern. Nevertheless, while performance on safeguards is improving, the Bank's goal of full compliance with all safeguard policies has clearly not yet been reached.

Two high-visibility projects, the **Chad-Cameroon Petroleum Development and Pipeline Project** (see page 32) and the **Western Poverty Reduction Project** in China, served to raise internal and external awareness of the Bank's safeguard policies and the importance of compliance for the World Bank Group's reputation.

Mainstreaming compliance

Ensuring compliance with the safeguards (and with other policies, such as those on fiduciary responsibilities) has been under review by Bank Management as part of the detailed working out of the Bank's renewal process and also in the broader context of corporate risk management.

Disclosure Requirements for Safeguard Policies

Document	Disclosure Policy Requirement		
	Format	*Placement*	*Timing*
Category A EA	Separate document	Freestanding	Disclosed locally and received by Bank before appraisal. Once received by Bank, sent to InfoShop unless, in exceptional circumstances, borrower objects.
IBRD Category B EA	Separate document or section in PAD	Annexed to the PID	If a separate document, once received by the Bank, sent to InfoShop unless, in exceptional circumstances, borrower objects.
IDA Category B EA	Separate document or section in PAD	Annexed to the PID	If a separate document, disclosed locally and received by Bank before appraisal. Once received by Bank, sent to InfoShop unless, in exceptional circumstances, borrower objects.
Resettlement plan and IPDP (with separate EA)	"Incorporate" in EA	Unclear: in EA or annexed to EA	When EA is disclosed.
Resettlement plan and IPDP (with no separate EA, e.g., some Category B)	---------- Disclosure not required ----------		

Decentralization, both geographical and in terms of project responsibility, has helped to improve the Bank's responsiveness to clients and the quality of its work. At the same time, it has generated new challenges of ensuring consistency in the provision of advice and application of policies.

The balance that has been established involves a decision to increase corporate oversight through a stronger central Quality Assurance and Compliance Team (QACT); reducing the risks of compartmentalization by proactive networking between the center and the Regions; and capturing the synergies of integrating safeguards work with country programs by physically co-locating the safeguard teams and the regional units.

Strengthening the Quality Assurance and Compliance Team

As reported in last year's *Environment Matters*, the Quality Assurance and Compliance Team (QACT) was established in ESSD in fiscal 1999 to oversee the Bank's safeguard policies. Including staff from all three families in ESSD and working closely with staff from the Legal Department, the unit was intended to support the Regions in achieving compliance with the safeguards. In the past year, the QACT has been significantly strengthened with increased resources, complemented by a system of Regional Safeguards Coordinators (see *Box*, next page). At the same time, the International Finance Corporation (IFC) has continued to strengthen its capacity for implementation of safeguards, and the Multilateral Investment Guarantee Agency (MIGA) has appointed specialist staff to address these issues.

The QACT has a fiscal 2001 budget of $2 million; expanded staffing of the unit is currently underway. The recent changes mandate the QACT to:

- Ensure that safeguard policies are effectively integrated into traditional lending instruments; addressed in policy-based lending; used appropriately in new lending instruments; and made a part of the Comprehensive Development Framework (CDF).
- Establish a structure with clear responsibilities for implementing safeguard policies and monitoring compliance with them.
- Develop an integrated system comprised of professionals in the Anchor, Regions, IFC, and MIGA for providing timely, high-quality advice on compliance issues.
- Establish and administer a practical information management system for compliance with safeguard policies and provide regular reports to senior management.
- Participate in a Bank-wide process for development of a system to identify and manage "high-risk" and "high-visibility" projects in coordination with the ESSD Sector Boards and Legal Department.
- Undertake, in collaboration with the World Bank Institute (WBI), a broad-based program of training initiatives for Bank and borrower staff to better equip them to address safeguard policy issues.

Key actions under way

In beginning to address this broad mandate the QACT will build on ongoing activities.

Establishment and Maintenance of a Compliance Monitoring System. A system is currently being developed to identify projects that trigger one or more of the 10 safeguard policies and to assess compliance with these policies and associated disclosure requirements at entry, during supervision, and at completion. Information disclosure requirements will be harmonized. (A simplified version of the current requirements is shown in the *Table*, page 19.)

Collaboration with Quality Assurance Group on Portfolio and Project Review Activities. The QACT, in coordination with other specialists, will participate in the annual quality assurance activities, focusing on compliance with safeguard policies and associated disclosure requirements. The QACT will also conduct selective country and sector reviews as well as reviews of high-risk projects on an ongoing basis.

Integration of Safeguard Policies into Risk Management Initiatives. All Bank Regions are undertaking risk management reviews at the portfolio and project level to provide World Bank management with a mechanism for early identification of risky projects. This will result in development of an overall evaluation of risk management issues and identification of programs and projects that may present a potential "corporate risk" and/or "regional risk."

Certification of "Corporate Risk Projects." Projects that present a "corporate risk" for safeguard policies will be reviewed and certified, as appropriate, by the relevant ESSD Sector Councils and Legal Department. It is anticipated that a system for triggering the certification of "corporate risk projects," on the basis of a variety of issues, will be developed as part of the ongoing risk management initiative. The QACT will develop a system for management and documentation of all reviews that are undertaken for the certification of "corporate risk" projects.

Establish a Safeguards Help Desk. A Help Desk is being established to provide guidance on

application and interpretation of safeguard policies and their disclosure requirements in different project contexts. The Help Desk will route requests from task team and other staff to appropriate specialists in the Bank, who will provide "just in time" quality advice.

Preparation of a CD-ROM on Safeguard Policies. Two CD Rom-based electronic guidebooks have already been prepared for use by Bank and borrower staff, one on Environmental Assessment, and another on Involuntary Resettlement. An interactive CD-ROM covering all safeguard policies is being prepared.

Guidance on Safeguard Policies in Structural and Sector Adjustment Lending. General operational policy for adjustment lending is set out in Operational Directive (OD) 8.60, which includes some guidance on good practice in adjustment loans with environmental consequences. Since March 1999, sectoral adjustment loans (SECALs) have been subject to the Bank's environmental assessment policy (OP 4.01). A process is now underway to convert the directive on adjustment lending into an operational policy. The QACT is leading the review of experience with adjustment lending, including the application of OP4.01 to SECALs, learning from staff experienced in the use of these instruments, and assessing trends in environmental components in adjustment loans.

Increasingly, the Bank is using instruments such as sectoral environmental assessments (SEA) to take a broader look at the environmental implications of development. For example, the **Poland Hard Coal Sector Restructuring Project** looked at the past, present, and future effects of the hard-coal mining sector. Guidance and advice on SEA will be developed on the basis of practical experience in this area.

Developing Capacity of Bank, Borrower, and Consultant Staff on Application of Safeguard Policies. The QACT will expand its training program with WBI to include training targeted to international, regional, and national consultants who prepare environmental and social studies, to fulfill the analytical requirements of the safeguard policies. In the capacity building area, collaboration also continues with WBI in training for Bank and borrower staff and in regional training activities. For example, the Middle East and North Africa Region published *A Guide for the Preparation and Review of Environmental Assessment Reports* as part of the Bank's overall effort to strengthen national environment agencies. Additionally, MNA took the lead in developing and implementing a program that strengthens the capacity of EA reviewers both within the Bank and throughout the Region.

Conduct Regional Training Workshops on Safeguard Policies. In collaboration with WBI and the Regions, QACT will help conduct training workshops covering the safeguard policies and their application. Regional training activities are planned for the Africa Region and South Asia Region, where personnel from other regions will also participate to encourage transfer of experience between Regions.

Issues for the longer term

Meeting the aims of the safeguard policies will depend on building a consensus about the key issues in safeguard policy implementation and how they should be addressed. In the process of accelerating and implementing the safeguards compliance system, a number of strategic issues have been identified that need to be addressed for the longer term. These include the following:

- Strengthening country ownership and capacity—developing realistic and pragmatic approaches, supported by capacity building and cross-country learning, so that country requirements and procedures are consistent with the safeguards.
- Application of the safeguard policies in new contexts—such as policy and programmatic lending; through broader sectoral and regional assessments; and in a more consistent way with the policies and procedures of clients and other donors.
- Assessing costs and improving cost-effectiveness—so that the objectives of the safeguard policies can be achieved while recognizing the costs, benefits and trade-offs in a development context.

It has been a year to remember and to learn for Bank management and staff dealing with compliance issues. Looking back, the gap between policies and implementation on the ground still leaves room for significant improvement. In moving ahead, the challenge is to focus our efforts in working with our client countries to jointly improve results on the ground.

For more Information

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For information about regional programs, contact: Jean-Roger Mercier (473-5565) or Cyprian Fisiy (473-3580) for Africa; Glenn Morgan (458-1909) for East Asia and the Pacific; Bernie Baratz (473-2333) or Stan Peabody (473-2723) for Europe and Central Asia; Juan Quintero (473-5294) for Latin America and the Caribbean; Sherif Arif (473-7315) or Mohamed Arbi Ben-Achour (473-2455) for the Middle East and North Africa; and Panneer Selvam (458-2728) or Warren Waters (473-6862) for South Asia.

1. The 10 policies cover environmental assessment, natural habitats, forestry, pest management, involuntary resettlement, indigenous peoples, management of cultural property, safety of dams, projects in international waterways, and projects in disputed areas.

This article was prepared by Stephen Lintner of the ESSD Network, (202) 473-2508, fax (202) 477-0565. Safeguards website — http://www.worldbank.org/institutional/manuals/opmanual.nsf

Poverty and Climate Change

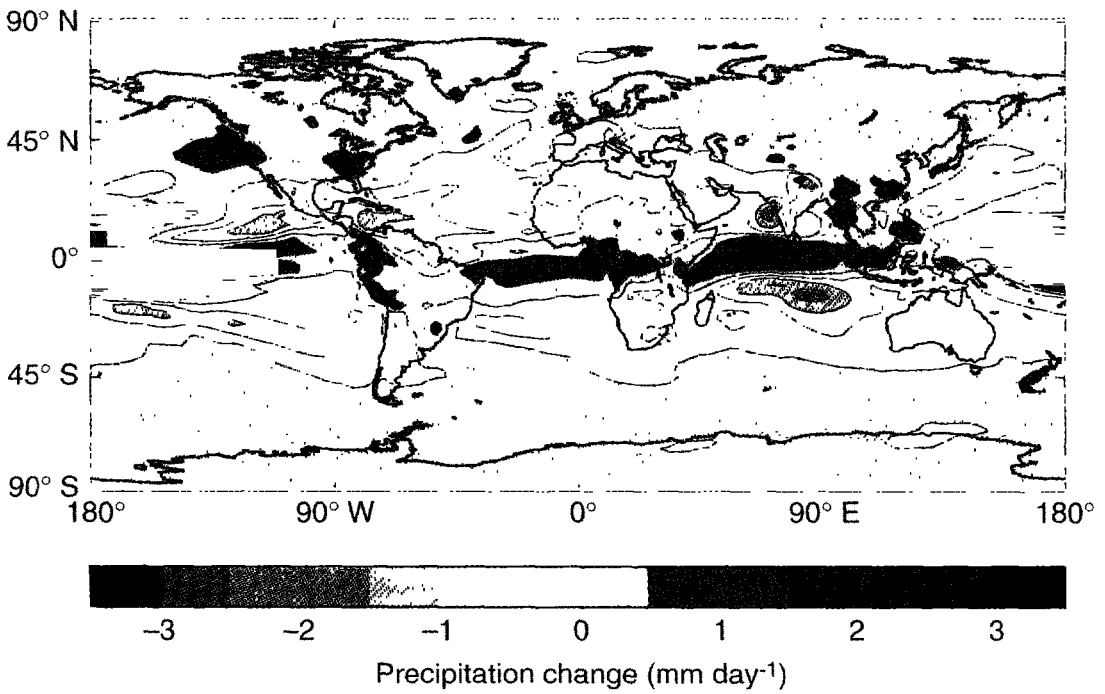
The debate about climate change has tended to primarily focus on *mitigation* of greenhouse gas emissions. While this is important for those countries responsible for most of the world's greenhouse gas emissions, most developing countries can do better in preparing to *adapt* to today's climate variability and long-term climate change. In practice, this does not require a new agenda. Rather, the concerns raised in the context of the climate change debate simply reinforce the urgency to address the fundamental problems facing poor people.[1] This means strengthening the commitment to improve the health of poor people (especially through the provision of water and sanitation), taking measures to reduce the impact of natural disasters through appropriate infrastructure planning, and more generally helping poor people through sound agricultural, land use, labor market, environmental, and macroeconomic policies to reduce and manage risk.

Climate change may exacerbate the problems already faced by poor people

The majority of scientific experts believe that human-induced climate change is inevitable. The question is not whether climate will change in response to human activities, but rather *where*, *when*, and by *how much*. For example, evaporation will be enhanced as the climate warms, and there will be an increase in global mean precipitation, accompanied by seasonal shifts, and an increase in the frequency and magnitude of heavy precipitation events. However, not all land regions will experience an increase in precipitation, and even those land regions with increased precipitation may experience decreases in soil moisture because of enhanced evaporation. Precipitation and runoff is projected to increase in tropical areas and at high latitudes, but decrease in summer over much of the subtropics and mid-continental

Observed change in annual precipitation for the 2050s

The change in annual precipitation for the 2050s compared with the present day, when the climate model is driven with an increase in greenhouse gas concentrations equivalent to about 1 percent increase per year in CO_2. This illustration shows the average of four model runs with different starting conditions.



Source: R. Nicholls, Middlesex University in the U.K. Meteorological Office. 1997. *Climate Change and Its Impacts: A Global Perspective*. Brittanic Crown Copyright.

areas; for example, in the Sahel, Southern Africa, the Middle East, and parts of Latin America (see *Figure*, page 22).

There is therefore increasing interest in mechanisms to better *adapt* to climate change—especially in developing countries. At the same time, measures to at least stabilize climate change (to the extent it is caused by human activities) are drawing growing attention in those countries best able to make a difference. According to the Worldwatch Institute, emissions of CO_2 fell by 0.5 percent in 1998, while the global economy grew by 2.5 percent. Coal sector reform in China and Poland may have contributed significantly in this regard, demonstrating the synergy between sound economic and environmental policies.[2]

In most cases, climate change is likely to exacerbate problems that developing countries are already facing. Extreme changes in weather affect a larger share of their economies because these are in climate-sensitive sectors (agriculture, coastal fisheries, forestry), and those living on subsistence agriculture cannot afford to engage in higher-risk activities that could lift them out of poverty. Poor people are most vulnerable, since they are often forced to live in flimsy dwellings in areas most prone to disasters—low-lying flood plains, coastal areas, or hillsides subject to mudslides from flooding, sometimes caused by upstream deforestation—and they typically do not have access to crop or health-care insurance. Between 1990 and 1998, 94 percent of the world's 568 major natural disasters and more than 97 percent of all natural disaster-related deaths were in developing countries.

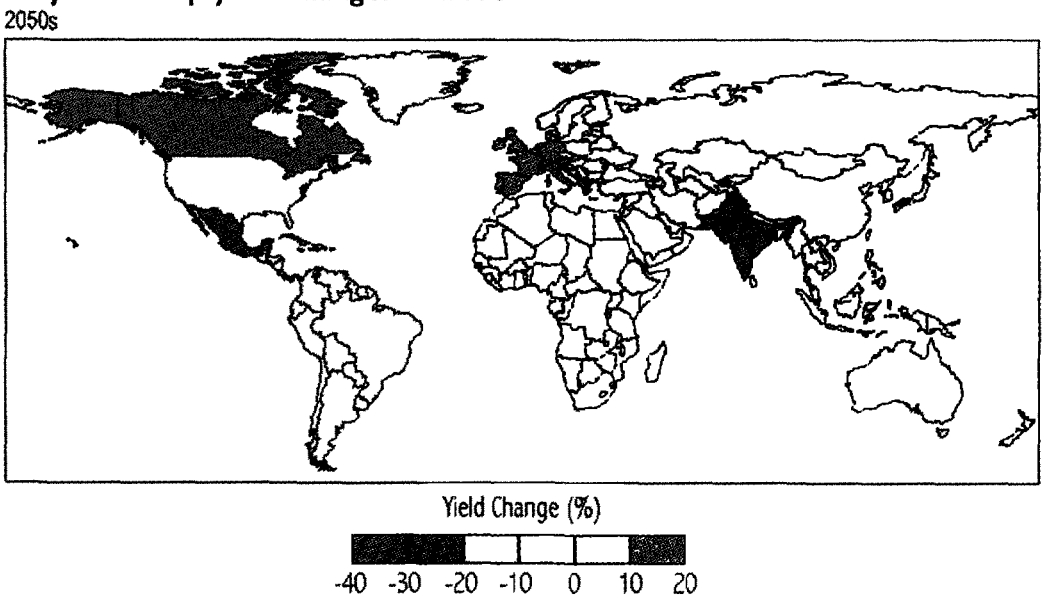
The following provides some examples of what the future might hold:

Food Security. Currently, 800 million people are malnourished. As the world's population increases and incomes in some countries rise, food consumption is expected to double over the next three to four decades. For changes in global mean surface temperatures of less than 2.5 degrees Centigrade, studies show that, on the whole, global agricultural production might be maintained relative to baseline production. But, with larger changes in temperature, production is likely to decrease. However, crop yields and changes in productivity due to climate change will vary considerably across regions and among localities, thus changing the patterns of production.

In general, productivity is projected to increase in middle to high latitudes, depending on crop type, growing season, changes in temperature regime, and seasonality of precipitation. In the tropics and subtropics, where some crops are near their maximum temperature tolerance and where dryland, non-irrigated agriculture dominates, yields are likely to decrease with even small changes in temperature, especially in Africa, Latin America, and Asia. In these regions, decreases in overall agricultural productivity of up to 30 percent are projected during the next 50 years (see *Figure*, below).

While there are competing and widely divergent views on the extent to which adaptation can succeed in preventing potentially adverse effects on the global balance between food supply and demand, most studies suggest that developing countries in the tropics and sub-tropics could face difficulties in adapting. Therefore there may be increased risk of hunger in some locations in the tropics and subtropics, where many of the world's poorest people live. These projections have considered the positive effects of higher atmospheric levels of carbon dioxide, but have not fully considered the effects of potential changes in climate variability, water availability, stresses from pests, diseases, and interactions with other existing stresses.

Projected crop yield changes — 2050



Source: M. Parry, et al. in the U.K. Meteorological Office. 1997. *Climate Change and Its Impacts: A Global Perspective.* Brittanic Crown Copyright.

Water Resources. Currently 1.3 billion people do not have access to adequate supplies of safe water, and 2 billion people do not have access to adequate sanitation. About 20 countries, primarily in the Middle East and Africa, are classified as water-scarce or water-stressed. Changes in water stress and water scarcity will depend, in part, on climate change, but will be predominantly shaped by future growth in water demand; evolution of management of water supplies, demands, and quality; and the extent to which sustainable water management practices are adopted. Even in the absence of climate change, the number of water-stressed countries is expected to double by 2025, in large part because of inefficient uses in agriculture. Water stress and the frequency and magnitude of droughts are projected to be exacerbated by climate change in many semi-arid countries in northern Africa, southern Africa, and the Middle East (see *Figure,* this page).

Vulnerability in Coastal Areas. About half of the world's people live in coastal zones, although there is a large variation among countries. Changes in climate will affect coastal systems through sea-level rise (projected to increase by 15–90 cms by 2100) and an increase in storm-surge hazards, and possible changes in the frequency and/or intensity of extreme events. It has been estimated that people in low-income countries are four times more likely to die in natural disasters than people in high-income countries.[3] In Bangladesh alone, three storms, four floods, one tsunami, and two cyclones killed more than 400,000 people and affected another 42 million people between 1990 and 1998.

Disasters can cause irreparable life loss, undermine social capital development, and destroy livelihoods on a large scale. For example, development of the entire coastal region in Orissa has been set back several years after just three days of a major cyclone. Impacts may vary across regions, and social costs will greatly depend upon the vulnerability of the coastal system and the economic situation of the country. Sea-level rise will increase the vulnerability of coastal populations to flooding. Small islands and deltaic areas are particularly vulnerable to a one-meter sea-level rise, with land losses ranging from 1 percent in Egypt, to 17.5 percent in Bangladesh, to about 80 percent in the Marshall Islands, potentially displacing tens of millions of people (see *Figure,* page 25).

Human Health. Human health is sensitive to changes in climate because of changes in food security, water supply and quality, and the distribution of ecological systems. Indirect effects could include increases in infectious diseases such as salmonellosis, cholera, and other food- and water-related infections, (because of climatic impacts on water distribution and temperature); and micro-organism proliferation. There could also be an extension in the range and season for vector organisms, thus increasing the transmission of vector-borne infectious diseases (such as, malaria, dengue, yellow fever, and encephalitis).

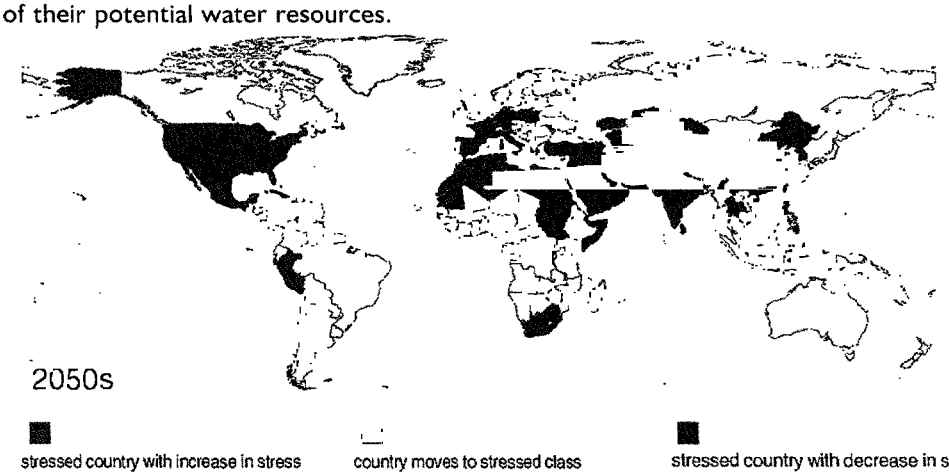
The agenda for developing countries

Food security, water resources, vulnerability in coastal areas, and human health are not new issues in developing countries, and climate change only reinforces the urgency with which they need to be addressed. In other words, the climate change debate does not call for a different or new strategy Most of these problems are already acute today, and their solution calls for sound economic and social policies, including:

- *Helping poor people manage risk better, such as from harvest failure and food price increases.* This requires agricultural policies that take into account weather-related requirements. For example, subsidies for maize may not be sensible in an environment where climate is highly variable, locking farmers into an inappropriate crop. Similarly, agricultural storage capacity needs to accommodate seasonal fluctuations in crop production.

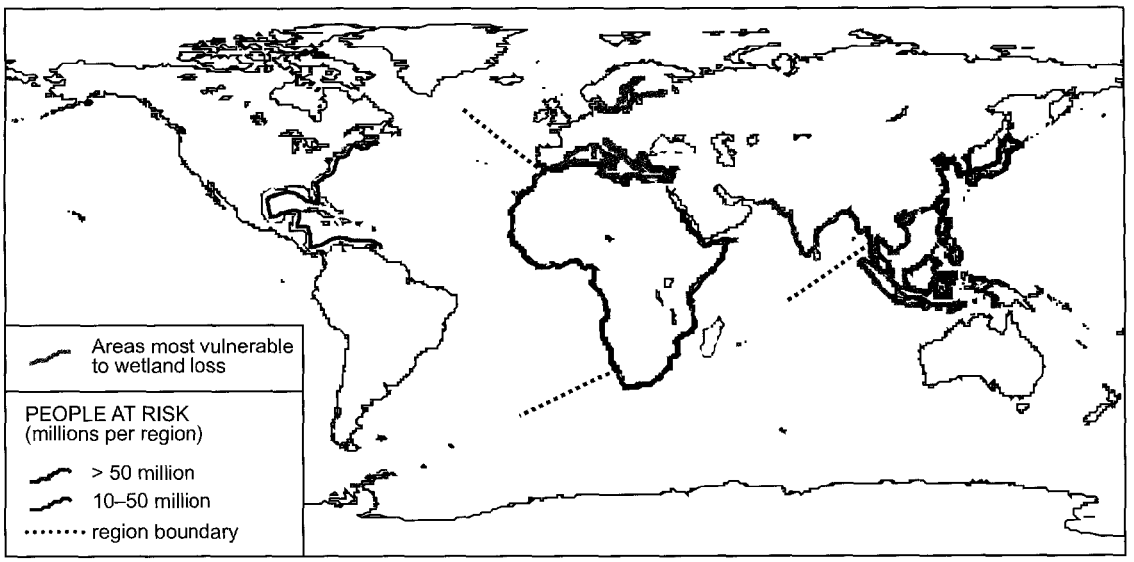
Change in water stress

Change in water stress, due to climate change, in countries using more than 20 percent of their potential water resources.



Source: N. Arnell and R. King, University of Southampton in the U.K. Meteorological Office. 1997. *Climate Change and Its Impacts: A Global Perspective.* Brittanic Crown Copyright.

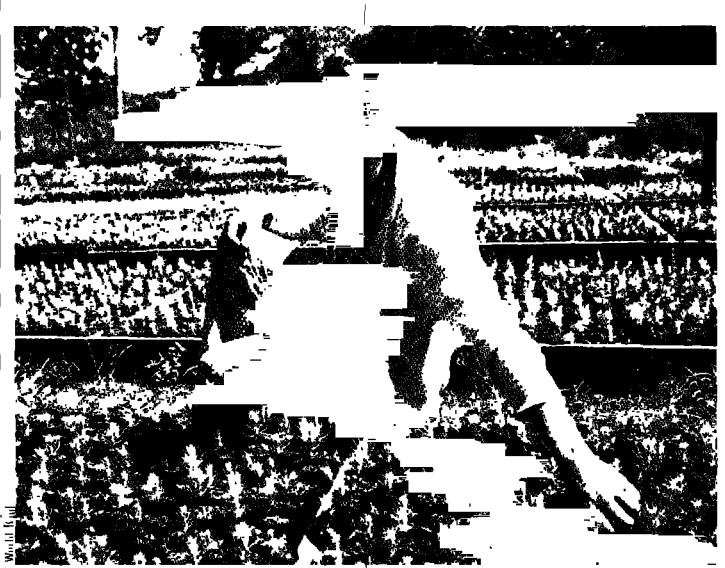
People at risk from a 44 cm sea-level rise by the 2080s, assuming 1990s level of flood protection



Source: R. Nicholls, Middlesex University in the U.K. Meteorological Office. 1997. *Climate Change and Its Impacts: A Global Perspective.* Brittanic Crown Copyright.

In areas prone to droughts and floods, community food banks might be considered. Water-use efficiency needs to be improved worldwide, and especially in arid countries.

- *Reducing and preventing risks and vulnerability from natural disasters.* While disaster preparedness and rapid response is important, better results can be achieved by averting, avoiding, and/or adapting to hazards. An important element in this approach is to protect and rehabilitate environmental systems and resources. For example, reforestation can help avoid landslides and downstream flash floods. Conservation of wetlands and clearing of drainage systems can prevent floods in urban areas. And well-planned coastal development reduces the risks of flooding when mangroves and coral reefs are protected.
- *Reducing the livelihood impact of natural disasters (including unemployment).* For example, urban neighborhood work programs can be designed to improve building practices and make urban settlements less disaster-prone in the future. And government at different levels can help diversify economic activities to ensure that communities are not vulnerable in case of natural or economic shocks.
- *Providing the most extensive coverage possible of water supply and sanitation—combined with good hygiene education—in order to improve public health, reduce child mortality and reduce the risk of infectious diseases.* These investments represented the single most significant factor leading to the major increases in life expectancy observed in industrialized countries at the end of the last century.



Preparing seedlings for planting.

1. These issues are addressed in detail in the World Bank's forthcoming *World Development Report* 2000/01 on Poverty.

2. In 1998, China's economy grew by 7.2 percent, while its CO_2 emissions fell by 3.7 percent. The removal of coal subsidies is considered an important factor in this case. Similarly in Poland, the economy grew by 6 percent, while emissions declined by 9.7 percent.

3. International Federation of Red Cross and Red Crescent Societies. *World Disasters Report 1999*, p. 34

This article was prepared by Robert T. Watson of the Office of the Vice President (ESSD), (202) 473-6965, fax (202) 522-7122, and Richard O. Ackermann of the South Asia and Pacific Environment Sector Unit, (202) 473-2606, fax (202) 522-1664.

Revisiting the Rural Development Strategy

The World Bank's Rural Development group is beginning work on a revision of *Rural Development: From Vision to Action*, the rural development sector strategy published in 1997.

The goals of the 1997 strategy—poverty reduction, widely shared growth, household, national and global food security, and sustainable natural resource management—are as valid today as they were then. As the Rural Development group revisits the strategy, it will pay particular attention to the lessons learned from implementation in the past three years; to emerging priorities, which reflect changing global conditions; and to an action-oriented approach.

There are several compelling reasons for a strong Bank focus on rural development. While the world is witnessing rapid urbanization in the developing world, rural areas are still home to the majority of the population. More importantly, rural areas will be home to the majority of the world's poor residents for the foreseeable future. Rural poverty is pervasive and persistent. Absent a major, committed and sustained effort to reduce rural poverty, the Bank's overall objective of poverty reduction simply cannot be met. Without broad-based agricultural and economic development, which empowers several hundreds of millions of low-income people with sufficient purchasing power to improve the quality of their diet and their quality of life, we will neither significantly reduce rural poverty nor improve food security. However, this must be achieved without significantly harming the environment. An important cornerstone will be continued promotion of more environmentally friendly and sustainable approaches to rural development.

Family farming, Latvia.

Looking back

Rural development: *From Vision to Action* mapped out several recommendations:

- *Take a broad rural focus rather than a narrow agricultural sector focus.* For example, instead of dealing with agriculture, livestock, or forestry separately, focus on the management of natural resources in sustainable production systems.
- *Involve all World Bank staff in the promotion of rural development.*
- *Work with partner countries and the broader international community to integrate rural development in overall country development strategies.* The strategy stressed the formulation of Country Assistance Strategies as an integrating tool.
- *Address old issues in new ways.* Examples of new approaches include involving stakeholders in the development and execution of projects; involving the private sector in delivering infrastructure and other services; and using community-based management to promote sustainable resource use.

- *Reverse environmental degradation.*

Sustainability and rural development

One of the important objectives of the Bank's rural development strategy is to identify and promote new approaches to sustainable natural resource management. Environmental degradation is one of the most significant drivers of rural poverty, and leads to a downward spiral of declining agricultural productivity, increasing poverty, and further degradation.

Several recent Bank projects illustrate the potential for sustainable natural resource management.

Watershed. In eastern Turkey, in an area of erosion-prone, fragile soils, there was unprecedented cooperation between government agencies and local communities in the **Eastern Anatolia Watershed Management Project.** Some 79 microcatchment rehabilitation plans are underway covering 600,000 hectares and 300 villages with over 200,000 people. Later this year, this approach will be initiated in 13 additional provinces. The project typifies a more holistic, partnership-based approach. Utilizing partnerships between communities and local and national government, the project tackled both sides of the resource degradation issue—income-generation activities and improved natural resource management techniques. There are many early indicators of project success, including reduced rates of outmigration (and some return inmigration to the project areas), a substantial increase in fodder trees, a reduction in the number of grazing animals and an increase in stall feeding, and increased adaptation of dryland and irrigation forages.

Land. The **Sodic Lands Reclamation Project** in Uttar Pradesh, India, has had a significant impact on poverty and institutional development. The primary beneficiaries targeted are poor, marginal farmers and the landless poor. The project includes extensive community participation, use of remote sensing and GIS, extensive monitoring systems, and applied research. Virtually all the work was done by some 175,000 farm families, including 55,000 families who were previously landless. These farmers were given clear title to the land they reclaimed. Within six months of reclamation activities, yields of rice and wheat doubled original project estimates, wage rates doubled, and land values quadrupled. There is no doubt poverty has declined, and migration to urban areas has fallen in the project area. The project is being scaled up to include 69,000 hectares.

Fisheries. As part of the Bangladesh **Fisheries III Project**, a community-based floodplain was stocked with fingerlings. In addition to maintaining the diversity of the existing fish stocks, the additional species showed average weight gains of 700 percent. The beneficiary fishermen have been able to repay loans, buy land, renovate houses, and enroll their children in school. The **Fisheries IV Project** aims to address the many environmental problems stemming from unplanned shrimp and fish production, including water quality problems and the loss of wetlands and mangroves.

Revising the strategy

The definition of rural development and the major strategic objectives outlined in *From Vision to Action* are clearly still valid and appropriate. Since the mid-1990s, however, there have been significant changes in the countries where the Bank is implementing rural development programs, as well as in the global arena. In several areas, there is a need to revisit the strategy.

Nonagricultural Issues. Agriculture is a critical catalyst to sustainable rural development, but agriculture alone is insufficient. The revised strategy will highlight the need to bring rural infrastructure, rural education and health, and rural nonagricultural business activities into the mainstream of rural development activities.

Infrastructure. In the rural infrastructure area, infrastructure upgrading and maintenance increasingly should be supported and implemented by private contractors and local communities in partnership with local government.

People and Communities. The new strategy will reflect a commitment to assisting poor rural people and communities in identification, prioritization, determination, and implementation of solutions to their development priorities.

Private-Sector Growth. In many developing nations, the neglect of infrastructure and public services in rural areas is an impediment to private-sector development. The new strategy will carefully assess how the Bank could catalyze private-sector development in rural areas.

Timing and objectives

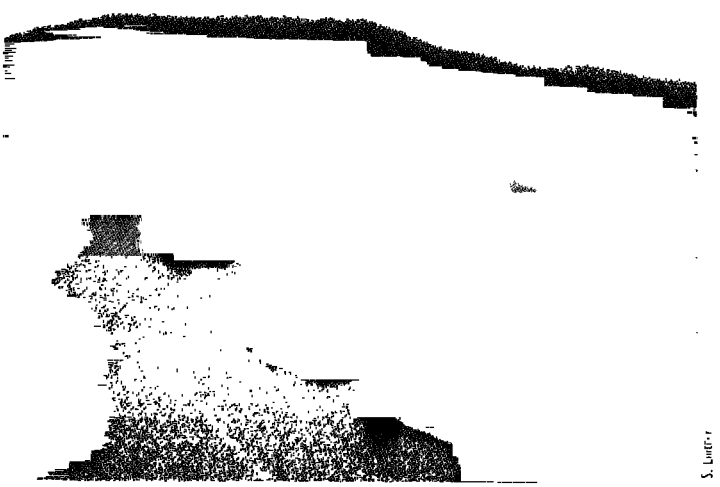
Recognizing that rural development is country and regionally specific, the new strategy will include the development of detailed regional strategies and action plans. The regional strategies will focus on past project and policy experiences, identifying what has worked well and the major lessons learned in implementing the World Bank's rural development activities. The final product will include both the overall strategy and action plan as well as the regional strategies. It is hoped that the new strategy will be completed by mid-2001.

This article was prepared by Lynn R. Brown of the Rural Development Department, (202) 458-8175, fax (202) 522-3307. It is based, in part, on a concept note on the new rural development strategy prepared by Csaba Csaki. Website — http://www.worldbank.org/rural

Payments for Environment Services

The environmental services provided by natural ecosystems are often taken for granted until they are lost. For example, the hydrological services provided by forests are only noticed after deforestation results in flooding or dry-season water scarcity. That such services should be lost—despite their value—is easy to understand: Land users typically receive no compensation for the services their land generates for others, and so do not take them into account in making land-use decisions.

Recognition of this problem has led to efforts to develop systems in which land users are compensated for the environmental services they generate. Several countries are already experimenting with such systems (see *Box*), especially in Central and South America, where the effects of Hurricane Mitch have made the need to protect environmental services clear. The World Bank is assisting several countries in developing systems of payments for environmental services, with the Latin America and Caribbean region taking the operational lead and the Environment Department providing technical support.



Southern Thailand.

Environmental Service Payments — National Initiatives and World Bank Support

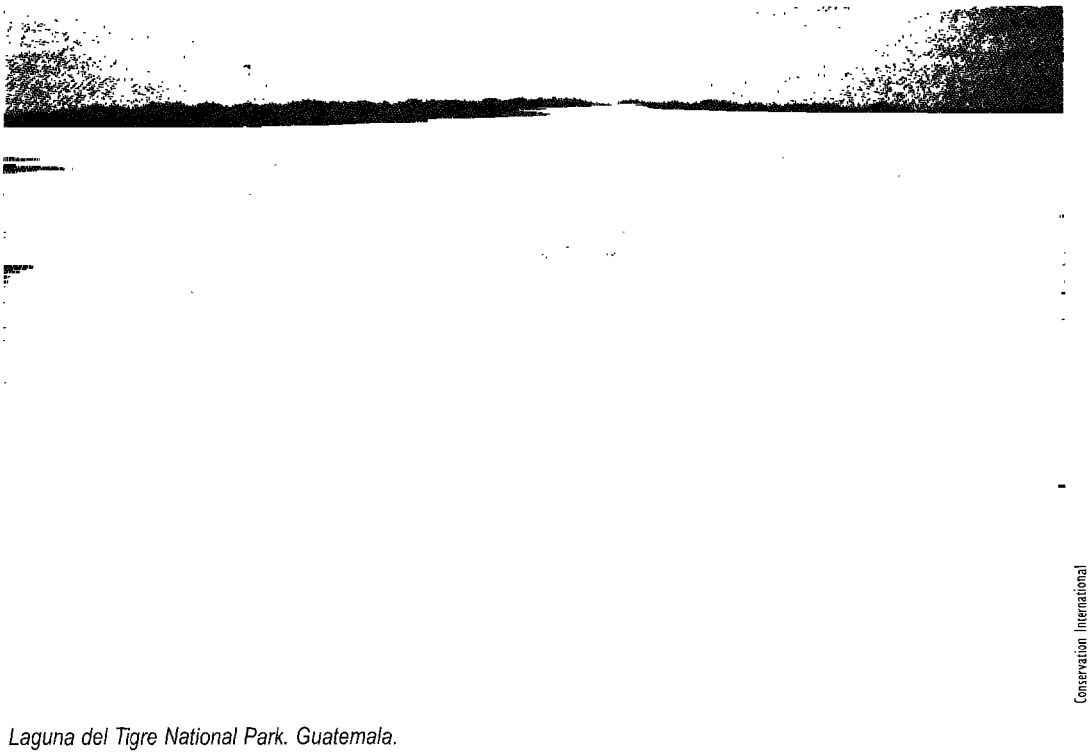
- **Costa Rica** has the most advanced system of payments for environmental services. Land users who protect natural forests or reforest their land receive payments of about $50 per hectare per year. These payments are financed from energy taxes, the sale of carbon offsets, and international donations for biodiversity conservation. This program is now supported by the World Bank and the GEF through the **Ecomarkets** project.
- In **Ecuador**, the municipal water authorities in Quito and Cuenca are allocating part of their revenues to financing protection activities in the watersheds from which they receive the bulk of their water. The World Bank is assisting the government in preparing a project on payments for environmental services from private lands, which would serve as a pilot for expanded efforts both in the country and in other Amazon basin countries.
- In **Colombia**, many water-user groups pay for watershed services—sometimes by buying the entire upper watershed. Power companies must by law pay a percentage of their revenues from hydroelectric power to the regional corporations that are responsible for watershed management.
- In **El Salvador**, the World Bank is assisting the government to develop the Natural Environmental Management Project, which will use payment mechanisms to obtain environmental services—in this instance, watershed protection (primarily for flood control/disaster prevention) and the creation of biodiversity corridors to link the country's protected areas.

Identifying environmental services

The benefits sought from land-use changes typically include (but are not limited to):

- *Hydrological benefits.* Controlling the timing and volume of water flows, and the quality of water;
- *Reducing sedimentation.* Avoiding damage to downstream reservoirs and waterways and hence their uses (hydroelectric power generation, irrigation, recreation, fisheries, domestic water supplies);
- *Disaster prevention.* Preventing flooding and landslides; and
- *Biodiversity conservation.* Ensuring that land uses are more friendly to biodiversity.

Both qualitatively and (especially) quantitatively, we often know less about the services generated by different land uses than we think we do. This reflects partly the diversity of conditions encountered (for example, hydrological benefits depend on the rainfall regime, on the type of soil and vegetation, and on topography) and on the objectives being sought (for example, regulating waterflows to avoid flooding and dry-season deficits may require different interventions than maximizing total water volume).



Conservation International

Laguna del Tigre National Park. Guatemala.

Effective systems. Environmental service payments will only have the desired effect if they reach land users in ways that motivate them to change their land-use decisions. In general, several principles are clear:

- *Make payments on-going.* The benefits being sought will generally be enjoyed year after year, as long as appropriate land uses are maintained. For this to occur, land users must receive payments as long as they maintain the land use.
- *Target payments.* An undifferentiated payment system that pays everyone the same will be much more expensive than a targeted scheme. It will also make it difficult to tailor interventions to the particular requirements of given situations.
- *Avoid perverse incentives.* For example, payments for reforestation can encourage land users to cut down standing trees so as to qualify.

Financing and institutional issues

Systems of environmental service payments must have secure sources of financing. Ideally, beneficiaries of the services are charged—for example, fees can be assessed on water users to pay for conservation of water sources. Once established, these systems can be self-financing, and not require continued support from government budgets.

Designing and implementing systems of payments for environmental services may require changes in the legislative and regulatory framework. They often also raise thorny political economy and equity issues.

Work on payments for environmental services is undertaken by the World Bank Environment Department's **Policy, Economics, and Pollution Team**, in collaboration with LCR, RDV, DEC, and other Bank units. A website has been established to share information and best practices in this field (http://www-esd.worldbank.org/eei), under "New Initiatives."

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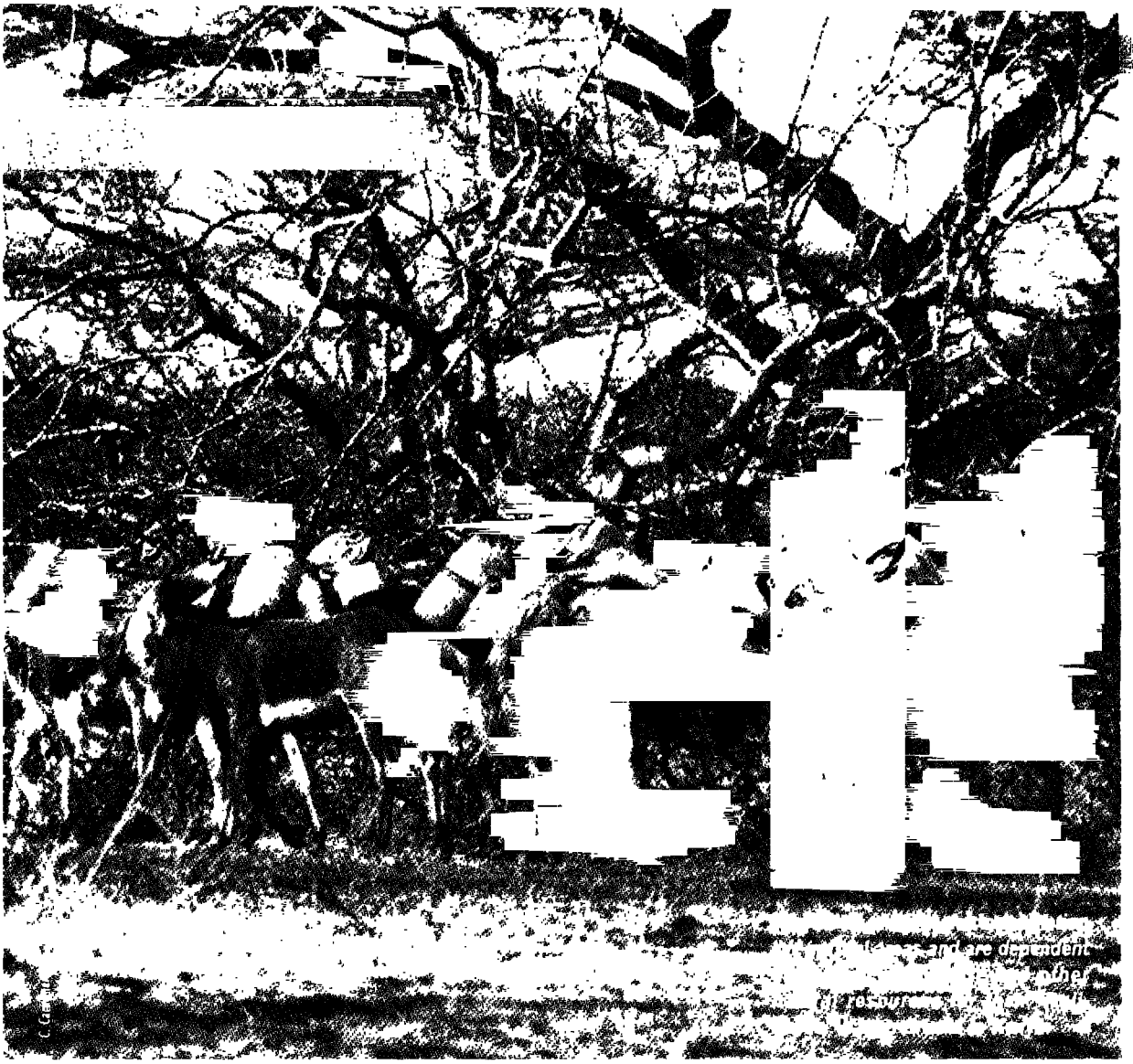

Angola
Benin
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Burundi
Cameroon
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Central African Republic
Chad
Comoros
Congo, Democratic Republic of
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Côte d'Ivoire
Equatorial Guinea
Eritrea
Ethiopia
Gabon
Gambia, The
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Kenya
Lesotho
Liberia
Madagascar
Malawi
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Mauritania
Mauritius
Mozambique
Namibia
Niger
Nigeria
Rwanda
São Tomé and Príncipe
Senegal
Seychelles
Sierra Leone
Somalia
South Africa
Sudan
Swaziland
Tanzania
Togo
Uganda
Zambia
Zimbabwe

In Sub-Saharan Africa, the World Bank's mission to fight poverty with lasting results is inescapably linked with environ-mental protection and improved management of renewable natural resources. Two-thirds of the region's population live in rural areas and are dependent on rainfed agriculture and other natural resources for their livelihoods. Ecological processes largely ensure adequate supplies of clean water, maintain soil fertility, and provide woodfuels and other essential products.

Major African cities also depend heavily on natural resources from surrounding areas. In both rural and urban areas, poor people are the most affected by the loss of natural resources and the deterioration of environmental services. They are also the most vulnerable to natural disasters, often intensified by unsustainable land-use practices.

In the Africa Region, our efforts continue to focus on assisting our client countries to reverse environmental degradation in their pursuit of sustainable economic development.

Challenges ahead

The environmental challenges facing the Africa Region are complex and diverse, yet they are a critical part of an overall poverty alleviation strategy. Key challenges include the following:

Mainstreaming. Concerted efforts are required to make environment an indispensable part of Bank work in *all* sectors; that is, mainstreaming environment within the public and private sectors of the countries themselves. The small resources available for stand-alone environment programs are insufficient to get results.

Private-sector Growth. To ensure sustainable growth, the private sector needs to incorporate principles of environmental sustainability through approaches such

as the green certification of products, eco-labeling, and meeting the requirements of ISO 14000. Privatization of industry presents an opportunity to remedy a legacy of toxic, hazardous, and health-damaging liabilities.

- *Biodiversity Conservation.* Survival of the region's globally significant biological resources will depend not only upon global support through the GEF, but also upon long-term conservation financing programs and externally funded trusts or endowments.
- *Urbanization.* Without intensified environmental planning and management, unplanned growth in cities will exacerbate the depletion of forests and the degradation of freshwater and marine resources.
- *Transparency.* Transparency in resource management decisions is necessary to evaluate competing agendas, especially the tradeoffs between short-term benefits and irreversible long-term losses.
- *Environmental Assessments (EAs).* More proactive use of EAs can help shape investment decisions, identify opportunities, create awareness through disclosure, and help build environmental management capacity.
- *Ecosystem-wide Planning.* In Africa, ecosystems do not respect administrative borders. For example, most major rivers flow through several nations. Effective environmental management requires subregional accountability, cooperation, coordination, and accords.

Mainstreaming environment in the portfolio

The Africa environment portfolio includes several ongoing environmental management projects that are supporting the implementation of National Environmental Management Plans. In line with mainstreaming environment and decentralizing environmental management, new initiatives emphasize incorporating environmental components into sectoral operations, such as the **Chad-Cameroon Pipeline** project (see below).

In fiscal 2000, the Region also prepared an agenda for implementing the **Strategic Framework for Integrated Coastal Zone Management** in priority coastal areas, including rapidly expanding cities such as Lagos, Dar Es Salaam, Maputo, and Cape Town. The report is being updated in fiscal 2001.

The Region has also developed the *Global Environment Strategic Framework,* which is designed to mainstream global environment concerns and leverage global funding. The framework calls for more GEF and other funding to be strategically used and integrated into Country Assistance Strategies (CASs) and Bank operations. The strategic framework demonstrates linkages to natural resource management, rural development (for example, within the **Soil Fertility Initiative**, through GEF's Operational Program on **Integrated Ecosystem Management**), and climate change initiatives that provide both local and global benefits.

GEF Portfolio. Since fiscal 1999, the GEF project pipeline in Sub-Saharan Africa has doubled. From fiscal 1999 to fiscal 2000, the GEF allocation for the Africa Region increased by 31 percent. The portfolio is increasingly diversified, with more activities in climate change and international waters. New projects being prepared include **Lake Chad, the Nile Basin Initiative** (see below), **Senegal River Basin**, and **Niger River Basin**. In biodiversity and ecosystem management, more projects focus on coastal ecosystems as well as arid and semi-arid ecosystems, such as the **Burkina Faso Sahelian Integrated Ecosystem Management Program**, the **Niger Community-Based Integrated Ecosystem Management Program**, and the **Benin Program for the Management of Forests and Adjacent Lands**. The first proposal on sustainable transport and air pollution reduction in Benin also is under development.

In the Region's Medium-Sized-Projects (MSP) portfolio, 12 projects are approved and under implementation, and an additional 12 are in the pipeline. This funding window enables the Region to diversify project partners beyond governments to encompass community organizations and NGOs.

GEF in South Africa

During fiscal 2000, the GEF approved four Medium-Sized-Project grants for South Africa. The grants support adaptive research on conservation farming practices, conservation planning for the Eastern Cape thicket biome ecosystem, community-oriented development of a new national park in the Namaqualand region, and introducing solar thermal electric (STE) technologies as electricity generation options into Southern Africa.. These complement the **Cape Peninsula Trust** project already under implementation and the **Maloti-Drakensberg** project, which is in the final stages of approval. While several more individual projects are in the pipeline, the Government of South Africa and the Bank have agreed that South Africa is a good candidate for a programmatic approach to GEF support, in which GEF funds would be used systematically to add a global environmental dimension to a wide range of environmental management initiatives by government, NGOs and the private sector, and to stimulate investment in the conservation and sustainable use of globally significant biodiversity. A proposal for a GEF programmatic grant for South Africa is under development and should be submitted for GEF consideration sometime in fiscal 2001.

Safeguard policies and environmental assessment

During fiscal 2000, the Region continued to focus on a country capacity building strategy for environmental assessment. Part of the strategy is the **Capacity and Linkages in EIA for Africa** (CLEIAA) program, which by 2010 aspires to have a working EIA system in place in all African countries. Its short-term objectives are to (a) improve information sharing in African countries; the donor community; and relevant national, subregional, regional, and international organizations; (b) harmonize EIA capacity development efforts on the African continent; and (c) design long-term sustainability into the initiative and related organizational structure.

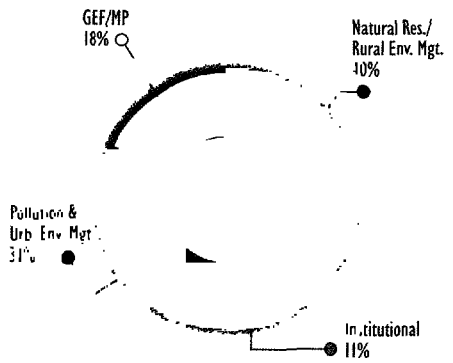
The Region initiated a convergence of environmental and social teams to facilitate compliance with the Bank's 10 safeguard policies, under the guidance of the Africa Region Safeguard Policies Enhancement team (ASPEN).

The Chad-Cameroon project

World Bank safeguard policies played a major role in the development of the **Chad-Cameroon Petroleum Development and Pipeline Project**, which was approved by the Board on June 6, 2000.

The project, expected to cost $3.7 billion, will develop the oil fields at Doba in southern Chad and construct a 1,070-kilometer pipeline to offshore oil-loading facilities on Cameroon's Atlantic coast. Almost all of the $3.7 billion investment is private. The World Bank is providing $93 million in IBRD funds to finance the governments' equity share in the project and a $100 million loan from the International Finance Corporation (IFC) to the joint-venture pipeline companies. Depending on world oil prices, the project could yield up to $2 billion in revenues for Chad and $500 million for Cameroon over the 25-year production period.

Projects Active during FY2000 with Significant Environmental Objectives



In addition to the IBRD and IFC investments, the Board approved two other IDA credits totaling about $30 million to help strengthen Chad's and Cameroon's capacity for environmental management and monitoring of the petroleum sectors. An international advisory group consisting of independent international experts will monitor the projects, with particular attention to social and environmental safeguards.

Following 18 months of analysis and publication of a 19-volume Environmental Impact Assessment and Management Plan, significant changes were made to the proposed right-of-way. As a result, the project will have only a minor net effect on the natural and human environments. The pipeline will be buried rather than above-ground. For most of the route, it follows existing infrastructure. No one will need to be resettled along the route, although a maximum of 150 families may be displaced where the oil itself will be produced.

The final route complies with World Bank safeguard policies, including those on Environmental Assessments, Natural Habitats, Indigenous Peoples, Cultural Property, Resettlement, and Forests. Only a small amount of tropical forest (10-15 square kilometers) will be lost as a result of the construction. To compensate for this, two large new national parks totaling about 5,000 square kilometers have been created in Cameroon, and will be managed for better biodiversity conservation in those areas.

The private developers will bear the major burden of the Environmental Management Plan, which has been extensively reviewed by the Bank and IFC teams. The loan packages incorporate independent monitoring activities whose objective is to maximize transparency and compliance with loan agreements. Positive side effects of the projects have already surfaced. For example, the Government of Chad has launched preparation of the country's first National Environmental Action Plan (NEAP). The challenge now is to ensure that these various commitments are carried through to satisfactory results.

Regional programs

Regional programs managed by the Environment Group in the Africa Region are grouped under the common label of **Capacity Building for Environmental Management** (CBEM). These programs include:

- **Networking for ESD** provides support for African-based networks such as the Network for Environmentally Sustainable Development (NESDA), the Environmental Information Systems program, and Managing the Environment Locally in SSA (MELISSA);
- **Environmental Assessment** has supported development of an African Stakeholder Action Plan for EA and subregional groupings to strengthen the role of EA in environmental management;
- **Integrated Coastal Zone Management** (ICZM) has developed an ICZM strategy (see *box*), delivered training to local NGOs/CBOs,

established a Coastal Database, designed a leadership training program, and developed EA guidelines for coastal tourism and aquaculture;

- **Environmental Economics** has studied the experience with economic instruments for environmental management and their applicability under African conditions, the links between economic reforms and environmental impacts, and mainstreaming environmental considerations in country strategy work. An example of the latter is an "Environment Update" for Ethiopia, which systematically reviews how environmental priorities have (or have not) been addressed; and
- **Climate Variability and Change** has supported studies on the impact of climate change on African agriculture, managed an IDF grant for the SADC Drought Monitoring Center, and designed a regional strategy for climate change.

With shrinking resources for regional activities, regional programs will be severely curtailed in fiscal 2001.

Mozambique — Coastal and Marine Biodiversity Management Project

Mozambique's coastal zone is unique in the East Africa region in terms of quality, diversity, and species richness of its habitats. It also provides a livelihood for thousands of people and is attracting significant foreign investment for tourism and other development. The joint IDA and GEF project approved in 2000 will support the development of a district-level model that integrates environmental and social sustainability into appropriate private and public sector investment. The project will support the formulation of two strategic spatial development plans covering both terrestrial and marine territory in two priority areas (Nampula and Cabo Delgado in the northern province). Project components include community pilot projects; an initiative to attract private investment that optimizes use of the resources of the coastal zone while conserving vulnerable ecosystems and coastal and marine biodiversity; establishing and strengthening protected areas management; providing training and public awareness; and providing monitoring and evaluation.

Ecosystem and landscape management

It is widely acknowledged that effective environmental management cannot be limited to isolated and localized interventions. Yet ecosystem management is a difficult challenge because of the lack of institutional mechanisms for coordinating land and resource use over large areas. Where vital resources such as river basins and wildlife habitats span national boundaries, the challenge is even greater.

The Nile Basin Initiative (NBI) is one example of regional cooperation to manage a major trans-border resource. The Nile Basin covers 10 countries and is characterized by extreme poverty, instability, rapid population growth, and environmental degradation. Urgent environmental issues include aquatic weed infestations, soil erosion, and sedimentation caused by forest clearing, overgrazing, and poor agricultural practices on steep, erosion-prone land. The riparian governments, facilitated by the World Bank, UNDP, and CIDA, have established the NBI in order to realize their shared vision of achieving sustainable and equitable development based on the common resources of the Nile River.

The countries of southern Africa have also begun to tackle the challenge of regional integration through transboundary initiatives that combine high-level political support and technical cooperation on the ground to achieve integrated planning and investment. The Bank is assisting in the development and implementation of the **Maputo Corridor Development**, the **Lubombo Spatial Development Initiative**, several **Transfrontier Conservation** areas, and the **Swaziland Biodiversity Conservation and Participatory Development Project.**

Forest management and biodiversity conservation

Deforestation and biodiversity loss are two urgent environmental issues in Africa. These losses impact the rural poor and national economies, as well as diminish a unique world heritage. Over the past 15 years, the Bank has largely disengaged from the forestry sector in Africa due to the poor performance and low impact of its operations. Its engagement in biodiversity conservation has been growing—primarily through the Global Environment Facility—but the impact of this support has generally been below expectations.

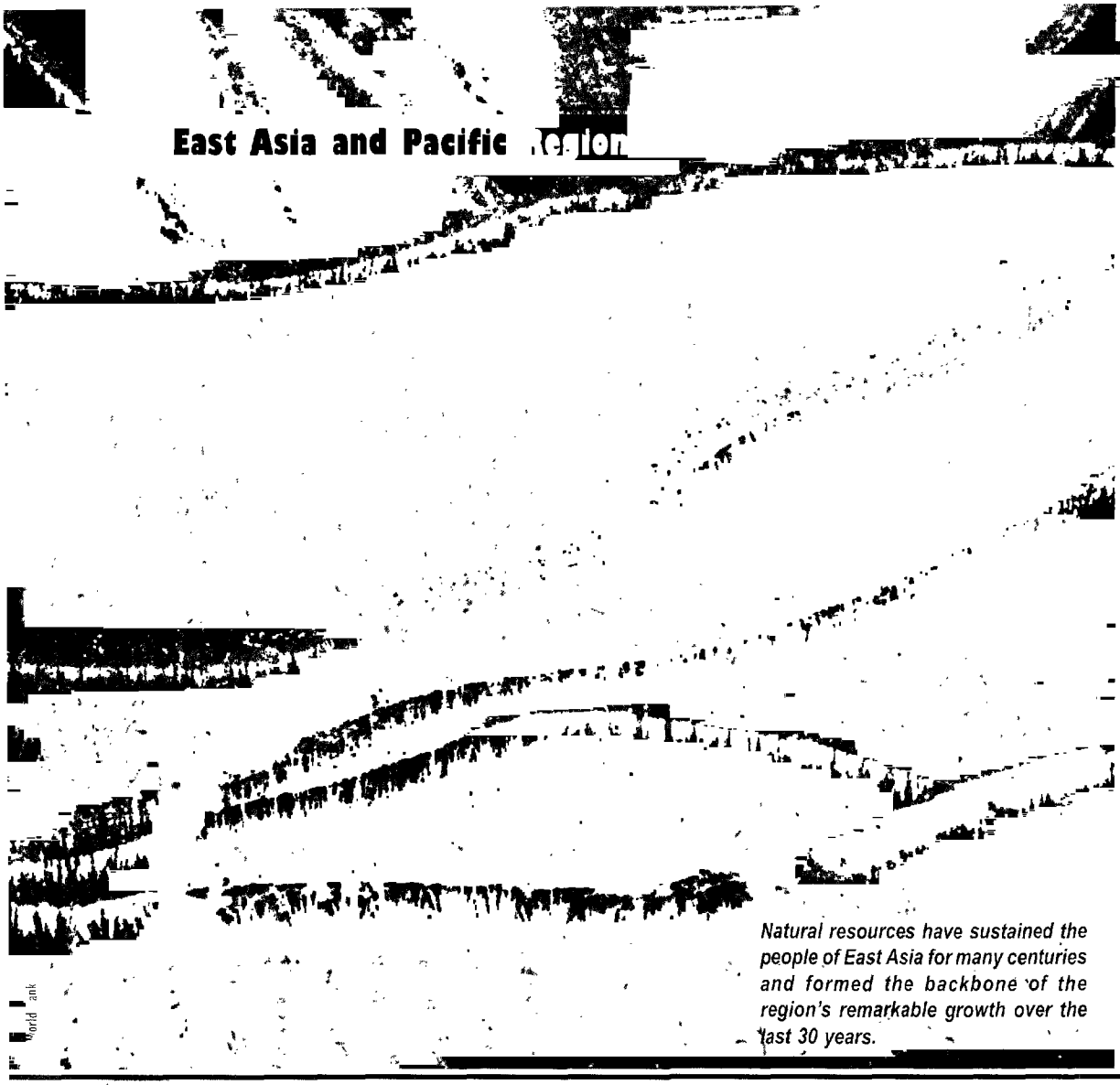
To improve its effectiveness in helping clients address these inter-related issues, the Africa Region prepared a Joint Operational Strategy (JOS) for improving forest management and biodiversity conservation in Africa. This strategy has coincided with and benefited from a broad-based review of implementation of the Bank's 1991 Forest Policy, as well as recently developed Strategic Frameworks for improved forest management and for biodiversity conservation in Africa.

Key elements of the JOS include adopting a phased approach to Bank intervention, using instruments such as market-based incentives, long-term programmatic lending and ecosystem management; and assisting African countries and rural people to capture a greater share of the growing market for global environmental services. The action plan for implementing the JOS identifies high-priority countries where forest and biodiversity loss is having the greatest economic, social and environmental impacts, and where increased Bank support may be effective.

This article was prepared by Nathalie Johnson of the Africa Technical Families: Environment, (202) 473-3765, fax (202) 473-8185. AFR website — http://wbln0018.worldbank.org/afr/afr.nsf

East Asia and Pacific Region

Cambodia
China
East Timor
Fiji
Indonesia
Kiribati
Korea, Republic of
Lao People's Democratic Republic
Malaysia
Marshall Islands
Micronesia, Federated States of
Mongolia
Myanmar
Palau
Papua New Guinea
Philippines
Samoa
Solomon Islands
Thailand
Tonga
Vanuatu
Vietnam



Natural resources have sustained the people of East Asia for many centuries and formed the backbone of the region's remarkable growth over the last 30 years.

In fiscal 2000, the East Asian financial crisis finally abated and the region began to emerge from its worst economic collapse in modern times. However, the resumption of sustained economic growth remains dependent on natural resources, and therefore needs to be based on greater attention to and better husbandry of the region's remaining resource base.

For East Asia to put more emphasis on the quality of growth rather than on its magnitude, it faces three main challenges. First, it must maintain and enhance investments that will improve the environment of the Asian megacities and other urban areas through reductions in air, water, and solid waste pollution. Second, it must reverse the present degradation of its forests, marine ecosystems, and watersheds. Third, it must harness the impetus for change that has emerged from the economic downturn and promote opportunities for local community involvement and participation in environmental protection.

To help East Asia meet these challenges, in addition to traditional lending, the World Bank has developed partnerships on specific themes such as the **CGI–Indonesia Forestry Policy Dialogue** (see *Box*, top of page 35) and the **Korea-World Bank Environment Cooperation** project, which was established to share Korea's experience (as a member of OECD) in industrial pollution abatement with other countries. EAP also committed $1.2 million to expand the safeguards work program and established a Safeguards Review Team (SRT) to manage the core social and environmental review and clearance work for the region (see *Box*, bottom of page 35).

Following concerns raised by NGOs over the compliance of the Qinghai component of the China Western Poverty Reduction Project with the World Bank's safeguard policies and procedures, the Inspection Panel conducted an investi-

The CGI–Indonesia Forestry Policy Dialogue

From the early 1970s onwards, the Government of Indonesia regarded the large natural forests of that country as an engine of economic growth. By the end of that decade, large volumes of logs were being harvested and exported, primarily to Japan, to supply the plywood manufacturing sector in North East Asia; official harvest estimates were about 19 million cubic meters per year. At this point, there was growing interest in converting to a policy of manufacturing plywood and other products in Indonesia. It was even argued by some that this would also reduce the pressure on the country's natural forests, because the transformation was to be achieved by a total log export ban.

Under the protection of the log export ban and other fiscal and trade policies highly favorable to the developing industry, the value of manufactured exports rose rapidly, from about $200 million per annum in the early 1980s to more than $9 billion by the mid-1990s. It became apparent that the capacity of the manufacturing industry was far larger than the sustainable output of log volume from the natural forests. Poor monitoring and enforcement of regulations by forest agencies resulted in deforestation of natural forest areas originally designated for logging. The most recent figures in Indonesia show that deforestation has been proceeding at a rate of about 1.6 to 1.8 million hectares per year.

The **CGI–Indonesia Forestry Policy Dialogue** originated from Indonesia's request for budgetary support from the IMF and World Bank in the wake of the financial collapse. Through a two-pronged approach, it is intended to further the reforms started in the Ministry of Forestry and Estate Crops in the late 1990s. First, it attached a set of environmental and natural resources policy and management conditions to the **World Bank Policy Reform Support Loan-I & II** and Letters of Intent of the IMF. Second, in the context of monitoring the implementation of these conditions, the World Bank embarked upon a consultative process to deal with complex forestry issues. Dialogue and consensus led to the preparation of a National Forest Program and to working within the partnerships that were developed among the World Bank, bilateral donor agencies, and NGOs active in forestry.

gation. After considering the findings of the investigation, the recommendations contained in the Bank's management report responding to those findings, and the deliberation of the Board of Directors, the Chinese authorities announced that they intended to use their own resources to implement that component of the project.

The environment portfolio

In the context of severe economic, environmental, and political/institutional shocks in East Asia in the past few years, the Bank has maintained its commitment to East Asian countries with a combination of lending and nonlending instruments. During fiscal 2000, EAP launched 10 new operations and continued mainstreaming environment in County Assistance Strategies (CAS) and economic sector work in countries such as Thailand and Indonesia. Furthermore, the Region is contributing to the World Bank Group's Environment Strategy with an EAP regional environment strategy.

Natural Resource Management. After completing a 10-year retrospective of natural resource management (NRM) experience in the region in fiscal 1999, the environment and social development sector unit (EASES) is currently formulating a medium-term NRM strategy for East Asia to help the Bank rededicate itself to policy and sector research to raise natural resources issues more consistently within the CAS and expand NRM policy interventions beyond the rural development portfolio. Some of the lessons emerging from the NRM review are being integrated into several forestry projects currently under preparation, including the **China Natural Forest Protection Project**. Furthermore, land titling efforts continue in Cambodia, Indonesia, Thailand, and Laos to ensure responsible

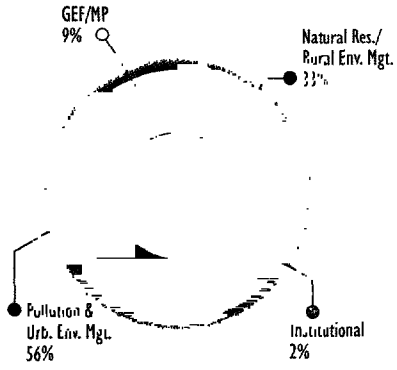
Social and Environmental Safeguards in East Asia

There were two main components of the EASES Safeguard Review Team (SRT) work program in fiscal 2000: (1) strengthening training; and (2) increasing supervision of safeguards implementation in the field.

On training, the SRT developed and delivered a modular safeguards training program to all HQ-based sector and country units in the region as well as to the staff of the major resident missions in the region. The SRT also worked with the World Bank Institute on development of comprehensive safeguards training materials being developed for the Bank as a whole. Regarding safeguards implementation, the SRT provided extensive support for project preparation and supervision, with particular attention to highly sensitive projects Presence in the field was also increased substantially through recruitment of staff in the World Bank Offices in China, the Philippines, and Vietnam.

The SRT also developed a biodiversity toolkit, which was posted on the Bio-node and EA web sites to help improve coverage of biodiversity issues in EA. A technical paper on water quality modeling was prepared and will be published later this calendar year. Finally, a portfolio risk assessment for the Philippines assessed environmental compliance and specified actions to enhance project environmental quality and reduce environmental risks in the country portfolio.

Projects Active during FY2000 with Significant Environmental Objectives



and sustainable use of natural resources at the community level.

Community-Based Programs. The **Metropolitan Environmental Improvement Program** (MEIP) has been initiated in Thailand and Vietnam. **MEIP-Haiphong,** financed with Australian and Dutch Trust Funds, combines citywide environmental assessment and priority setting with community-based pilots. Funded by an ASEM grant, **MEIP Thailand** is now active in Phitsanulok, Songhkla, Nonthaburi, and Nakorn Ratchisma. These cities have already identified their more pressing environmental needs and the community-based organizations that are best suited to execute them.

The GEF Portfolio. There are currently 15 GEF projects under implementation in the region, including eight biodiversity projects, six climate change projects, and the **Mekong River International Waters** project. The **Chiller Replacement Project** will assist Thailand to improve energy efficiency, reduce GHG emissions in the building chiller sector, and reduce consumption of ODS by assisting the Government of Thailand to replace 24 low-energy-efficiency chillers. Based on the results of this pilot, a larger-scale chiller replacement program will be developed to replace an additional 420 chillers. The **China Ozone Depleting Substances** (ODS) **IV Project**, a sector- and performance-based umbrella project, is supported by the Multilateral Fund (MLF) to the Montreal Protocol (MP). The current sectors under implementation are the halon, mobile air conditioning (MAC), and CFC production sectors. With the introduction of many ODS policies and regulations either already in place or under consideration, China remains on track to meet its obligations as scheduled. China has reported successful compliance to freeze production and consumption of ODS in 1999 to the average production and consumption levels of 1995 to 1997.

Sector Work. The recently concluded study on *Indonesia Environment and Natural Resources Management in a Time of Transition* provides an update of the state of the environment and natural resources in Indonesia in light of the economic and institutional crisis of the last three years. The report analyzes trends, patterns, and issues in terrestrial resource use, with particular attention to the relatively resource-rich provinces outside the island of Java. Its format varies from a progress report on the policy dialogue on priority issues, to expanded environmental policy analysis of issues that have become newly salient since the onset of the economic crisis. It also investigates the nexus between sustainable resource use and governance issues, with particular attention to decentralization of environmental and natural resources management. Indonesian professionals have made substantial contributions to various parts of the report.

The *Indonesia Environmental Expenditure Review* (EER) represents one of the most innovative country-specific studies done in the region. The review, an initial step toward an environmental analysis of the government budget of Indonesia, presents a policy-relevant method for analysis of public environmental expenditures; charts national and regional expenditure trends during the period 1994–99; and draws international comparisons with the 1997–99 crisis period. The EER shows that public expenditure for essential environmental services has been generally very low over the past five years and has further declined since the economic crisis. This indicates that opportunities to prevent future environmental damage and potential adverse impacts of resumed economic growth are being foregone. Based on the success of the Indonesia review, in fiscal 2001 EASES is planning to start a similar research exercise for both the Philippines and Thailand.

The first analysis of the mining sector in the region—*Mining and the Environment in Indonesia: Long-term Trends and Repercussions of the Asian Economic Crisis*—shows that the mining industry contributes over $5 billion annually to the economy, but the environmental and social damages of mining cost about $500 million annually. In addition to social ills and conflicts, damages include disturbance to land and ecological resources; long-term damage from acid rock drainage and mercury contamination; and water quality impairment. The report suggests strengthening the existing institutional framework to ensure the long-term sustainability of mining while the country is undergoing important economic and political changes.

Environment Monitors for the Philippines and Thailand present a snapshot of key environmental trends in the two countries. The *Monitors* are a companion to the recently published environmental sector notes, which set out the priorities for improving environmental quality and natural resources management in both countries and describe key environmental changes. The *Monitors* attempt to set baseline trends in various environmental indicators associated with air and water quality and natural resources conservation. Subsequent issues, to be published annually, will focus on selected environmental topics of current interest for both countries.

A student in China, elephants in northern Thailand and the harvesting of rice in southern Thailand.

Challenges ahead

Despite the significant portfolio of environment projects in the EAP region, this has been a difficult area for the Bank to provide financial support. With the possible exception of water supply, many countries in the region believe that environment projects do not have high rates of return, and thus require government subsidies, concessional financing, or grant resources. Furthermore, opportunities for lending for environmental institutional development are limited by the willingness of governments to borrow for such purposes; the extensive, grant-based financial support that is available through bilateral aid agencies; and the limited absorptive capacity of environmental institutions.

Solving pollution problems in the region will require significant investments. Whether EAP is able to participate in these investments depends on the competitiveness of the World Bank's resources. There is a growing feeling among many countries in the region that the conditions attached to the Bank's funds make them less attractive than other sources of funding. To operate under the Comprehensive Development Framework (CDF), it will be necessary for the Bank to work more closely with other donors and select activities in which the Bank has a comparative advantage. In Vietnam, one of the CDF pilot countries, donor coordination efforts have demonstrated both the benefits and challenges of the CDF. Especially for environment, it has helped to eliminate multiple donors pursuing the same activities. However, different objectives and institutional systems of donor agencies can also slow down the effectiveness of such partnerships.

To help East Asia build a more environmentally sustainable future, EASES plans to focus on (a) improving livelihoods through sustainable natural resources management; (b) fostering institutional development and helping countries in the region implement decentralization of environmental management; and (c) increasing public participation and envi-ronmental awareness through new approa-ches to pollution prevention and abatement and public information disclosure programs.

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Europe and Central Asia Region

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Macedonia, Former Yugoslav Republic of
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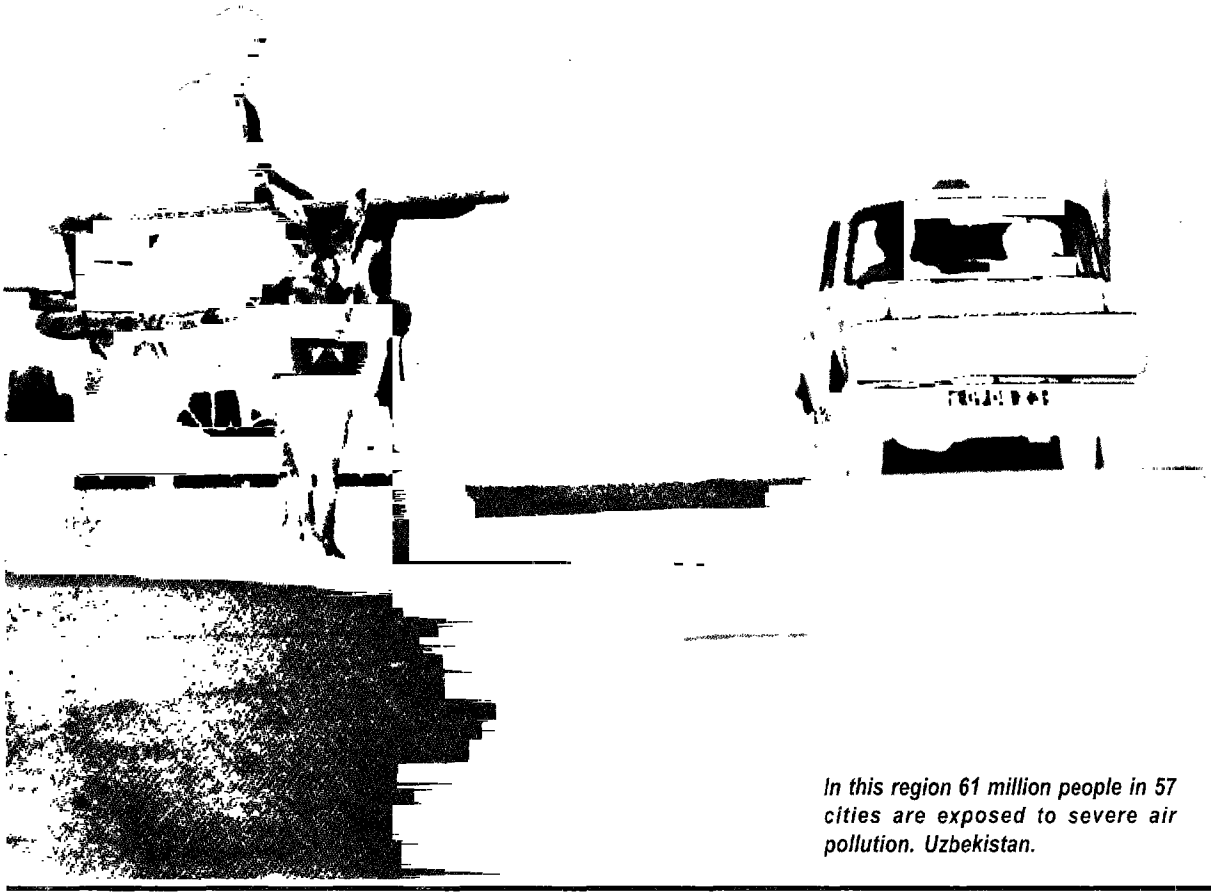


In this region 61 million people in 57 cities are exposed to severe air pollution. Uzbekistan.

Countries in the Europe and Central Asia (ECA) region, with the exception of Turkey, are dealing with major social and economic changes. Since the early 1990s, most countries have seen dramatic declines in their GDP and sharp increases in poverty, albeit from an initially low base.

Pollution levels have fallen, largely because of the drop in industrial production. If economic growth resumes, most countries can expect pollution levels to increase too. In some countries of Central Europe, however, the economy has grown, yet pollution has remained stable. This is because the composition of industry has changed, new owners have invested in modern production technology, and countries have applied good environmental policies, eliminated market distortions, and invested heavily in environmental infrastructure.

The region still has important environmental problems. Air quality has often not improved in proportion to the fall in emissions. In 57 cities in the region, 61 million people are still exposed to severe air pollution. This is because emissions from small sources such as cars, stoves, and small boilers have increased, even though emissions from large sources have fallen. Poor water resource management, particularly relating to irrigation, affects the livelihoods of some 30 million people. Deteriorating infrastructure and lack of funds for operation are causing an increase in water-borne diseases. Increasing poverty and sharp rises in utility prices are putting pressures on natural resources (for example, fuelwood) in some parts of the Newly Independent States (NIS—the states emerging from the dissolution of the former Soviet Union, except for the Baltic Republics) and the Caucasus.

Regional divergence

Over time, different groups of countries will emerge. One group is focused on joining the European Union (EU). This

gives them clear goals for future environmental policies, although implementing them will be administratively and financially costly. The standards require annual public expenditures on investment, operations, and maintenance equivalent to 2 to 15 percent of current GDP, which will require major decisions about phasing, financing, and cost recovery.

A second group of countries, mainly in the NIS, have identified their environmental priorities and are now facing the challenge of implementing them. Several countries are coping with the consequences of war and extreme poverty. They lack basic environmental infrastructure, and are seeing increased pressures on natural resources.

World Bank activities

Defining a portfolio of "environment" projects has always been somewhat arbitrary. Initiatives with important environmental effects tend to be implemented in traditional sectors such as rural and urban development, water and sanitation, transport and energy, rather than in environment projects. Sound environmental management is one of several conditions for sustainability. Hence, it is more meaningful to aim for environmentally sustainable outcomes from all activities rather than to develop environment projects.

Nevertheless, certain interventions (see *Pie Chart*) have objectives that are overwhelmingly focused on improving environmental conditions.

The World Bank's portfolio of projects targeted at improving the environment in the region currently consists of 22 lending operations in 15 countries.[1] The Bank finances $652 million out of total project costs of $1.1 billion. In addition, the Bank manages 22 GEF or Montreal Protocol Trust Fund grants totaling $217 million, which is about 66 percent of the total cost of the projects.

In late fiscal 1999 and fiscal 2000, the Bank board approved three self-standing environmental investments (in Bulgaria, the Russian Federation, and Tajikistan); three environmental projects co-financed by the GEF (one in Georgia and two in Poland); and five stand-alone GEF grants for projects in Central Asia, Croatia, Macedonia FYR, Slovak Republic, and Turkey. IBRD, IDA, and GEF funds committed to these projects amount to $181 million, or about 63 percent of total project costs of $290 million.

The **Bulgaria Environment and Privatization Adjustment Support Project** aims to improve environmental conditions by integrating environmental concerns into the process of privatizing highly polluting enterprises. It will do this by reforming environmental legislation, establishing a consistent framework for considering environmental liabilities, and accelerating Bulgaria's harmonization with EU environmental requirements and practices.

An IDA credit will support the **Tajikistan Lake Sarez Risk Mitigation Project** to help alert and prepare vulnerable people for a potential outburst flood from Lake Sarez and for smaller-scale natural disasters that occur frequently in the project area.

The **Georgia Agricultural Research, Extension, and Training Project**, supported by a Bank loan and GEF grant, will develop an efficient and cost-effective agricultural knowledge and information system to demonstrate, disseminate, and promote the adoption of appropriate technologies that increase sustainable agricultural production and reduce pollution from agriculture.

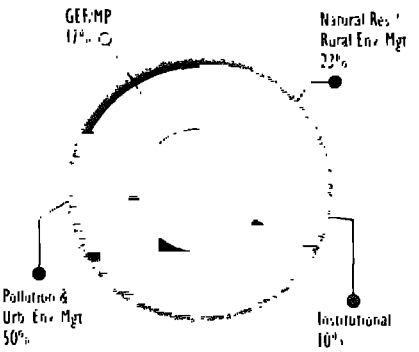
The **Poland Podhale Geothermal District Heating and Environment Project** is supported by a Bank loan and a GEF grant. It will reduce air pollution from local coal-fired space-heating boilers by increasing use of clean sources such as geothermal heat and natural gas. The proposed improvements in air quality are expected to improve the health of local people and also reduce damage to neighboring national parks and protected areas.

The **Poland Rural Environmental Protection Project** is also supported by both the Bank and the GEF. It will reduce nutrient runoff from agriculture, which leads to eutrophication of water bodies and pollutes groundwater. The project will train local agricultural extension agents to promote environmentally responsible farming practices and will finance environmental investments on farms.

The **Central Asia Biodiversity Project**, supported by a GEF grant approved late in fiscal 1999, is designed to protect vulnerable and unique biological communities within the West Tien Shan. It will help the three countries in the project area strengthen and coordinate national policies, regulations, and institutional arrangements to protect biodiversity.

In Macedonia, the GEF-supported **Mini-Hydropower** project will reduce emis-

Projects Active during FY2000 with Significant Environmental Objectives



sions of carbon dioxide by substituting electricity generated by hydropower for electricity generated from burning fossil fuels. Mini-hydropower plants will be installed on the municipal water supply pipes of three small towns currently being supplied with water from mountain springs above the towns.

In the Slovak Republic, a project for the **Conservation and Sustainable Use of Central European Grasslands** has received a GEF grant to help the Slovak Republic maintain representative samples of unique grassland ecosystems.

Another GEF grant will support the **Turkey Biodiversity and Natural Resources Management Project**, which will help conserve the biological diversity and ecological integrity of forest, wetland, steppe, and alpine ecosystems that are representative of Turkey's major biogeographic zones.

Nonlending activities

In addition to investments, the ECA Region supports several activities to help build local environmental capacity and understand the causes of environmental problems. ECA participates in the Environmental Action Program (EAP) for Central and Eastern Europe, which since the early 1990s has helped countries establish realistic targets for environmental improvements, both on the regional and the national level. For example, ECA supports a regional initiative to help build capacity to value environmental costs and benefits (see *Box*). In addition, ECA has helped two countries complete biodiversity strategies and has programs to help countries throughout the NIS build institutional capacity for environmental management.

ECA has studied interventions in rural water and sanitation in the region to understand the types of activities that improve people's health. The studies found that water quantity often matters as much as water quality, and found that including education on hygiene practices (hand washing, food preparation) can greatly improve the public health impacts of infrastructure investments.

ECA has also tried to look broadly at the environmental effects of economic and sectoral reforms. For example, as part of efforts to understand the effects of utility policies on poor people, interesting environmental effects have been found. In Armenia, electricity prices increased in 1999 as a result of sectoral reforms. Both qualitative and quantitative studies show that around 60 percent of households have increased their consumption of biomass (wood and, in a few cases, dung) to substitute for electricity. This is likely to have important environmental effects, such as deforestation and soil erosion. The increased use of biomass for heating increases the likelihood of health problems related to indoor air pollution, which is one of the main killers of poor people in the developing world. This is particularly the case in urban areas, where heating systems and buildings were not designed for burning wood.

Implementing Plans in Environmental Assessments—The Mining Sector

One of the most important functions of the environmental community in the World Bank is to implement the rules on environmental impact assessment. This involves reviewing all proposed investments, assessing their likely impacts on the environment, and developing plans to mitigate adverse impacts or increase potential benefits. Over the last year, the benefits of implementing these plans were evident in several projects.

The **Poland Hard Coal Sector Restructuring Project** involved a sectoral environmental assessment (SEA) that looked at the past, present, and future effects of the hard-coal mining sector. It provided an opportunity to look in depth at policy, process, implementation, and investment decisions of both past and future operations. The analysis had several important impacts. First, it improved the dialogue among the Ministries of Environment, Economy, and the mining companies. It also encouraged a thorough public consultation process. The analysis highlighted some ambiguity in the legislation and implementation of mining companies' handling of subsidence, which will now be clarified. The SEA also caused the authorities to re-evaluate their understanding of the severity of the environmental impacts of salt water emissions. It also suggested alternative investments that would achieve almost the same benefit for one-sixth of the cost ($25 million versus $150 million).

Learning from this experience, the Bank is now implementing a similar sectoral environmental assessment for the mining sector as a whole in Romania. This SEA will be more complex, with potentially greater impact on the environment because it involves a far larger number of mines and covers gold, uranium, mixed metal, salt, and sulphur mines as well as coal. The analysis will deal with past pollution and remediation efforts related to mine closures.

The environment strategy and implementation issues

The Bank is in the process of developing an environment strategy. In line with that effort, ECA intends to shift its geographic focus and concentrate on the needs of the NIS states and South Eastern Europe. In the EU accession countries, the Bank will work in collaboration with the European Union, and will put more emphasis on the countries that are furthest away from joining the Union.

Implementing the strategy poses several difficult challenges for the Region, including the linkages between poverty

Economic Valuation

Governments usually have a much stronger understanding of the costs associated with implementing environmental regulations than the associated benefits or the costs of inaction. Assigning values to benefits and costs can strengthen environmental agencies' dialogues with other authorities. It can enhance public awareness of the trade-offs between environmental and other measures. Agreement on methods to value the costs of past environmental damage can help in the process of prioritization.

Toward this end, the Bank is contributing to a comprehensive capacity-building activity that aims to:

- Elaborate practical guidelines for studies of the economic costs and benefits of environmental programs in the NIS
- Enhance the capacity of environmental authorities to apply modern valuation methodologies and to use the results for budget allocation and communication with mainstream ministries.

and environment and the critical role of good governance.

Poverty-Environment Links. In the ECA region, the relationship between poverty and environmental conditions is somewhat different from that in other developing areas, particularly in urban areas. First, the artificial land-use patterns and rigid housing market of the past mean that areas within particular cities tend not to be dominated by different income groups. Poor and nonpoor people tend to live in the same places. However, as housing markets are beginning to develop, especially in Central Europe, we can expect to see such differentiation. At that point, bad environmental conditions may affect poor people disproportionately. Second, access to utility services is quite widespread in the region, compared to other countries of similar income levels. The quality of that service, however, varies widely, and rich customers are better able to cope when service breaks down. Third, the region has many towns and cities built around highly polluting industries. In these areas, we face complex potential tradeoffs between employment or other social issues and environmental conditions.

Governance. Environmental management activities depend on good governance and strong institutions. This is particularly the case for management of natural resources, where weak institutions can lead to illegal forest exploitation, encroachment on protected areas, and fragmentation of monitoring efforts due to poor coordination between agencies. But it also affects permitting systems (such as environmental impact assessments) and efforts to protect resources where the benefits will only be seen over a long time horizon. Strong public institutions and good governance are lacking in many ECA countries, and these are often the ones with the most urgent environmental problems.

This poses a conundrum—how to help countries improve their environmental management in the absence of certain basic institutional structures, when civil servants are paid low salaries, when the judicial system is impossibly stretched, and when citizens have little faith in the rule of law and public institutions. Clearly, environmental staff need to contribute to Bank-supported public sector reform efforts. In addition, one possible approach is to work with civil society and try to empower people to improve environmental conditions themselves, to express their priorities, and demand services from public institutions. ECA is doing this in a number of community-based natural resource management activities. We are working with NGOs and local authorities in an effort to change incentive structures and create the conditions for poor people to manage natural resources in a sustainable manner.

Manure, if not properly stored, pollutes water bodies. The Bank is working in Georgia, Poland, and Romania to help farmers incorporate environmental concerns into agriculture—training extension agents, financing manure storage, helping restore permanent grassland, and creating buffer strips on the edge of water bodies, for example. These photos are from the Poland Rural Environmental Protection Project (IBRD and GEF financed) in Ostraleka, North East Poland

1. This includes financing from International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA), and the Global Environmental Facility (GEF). It does not include financing from the International Finance Corporation (IFC) or the Multilateral Investment Guarantee Agency (MIGA).

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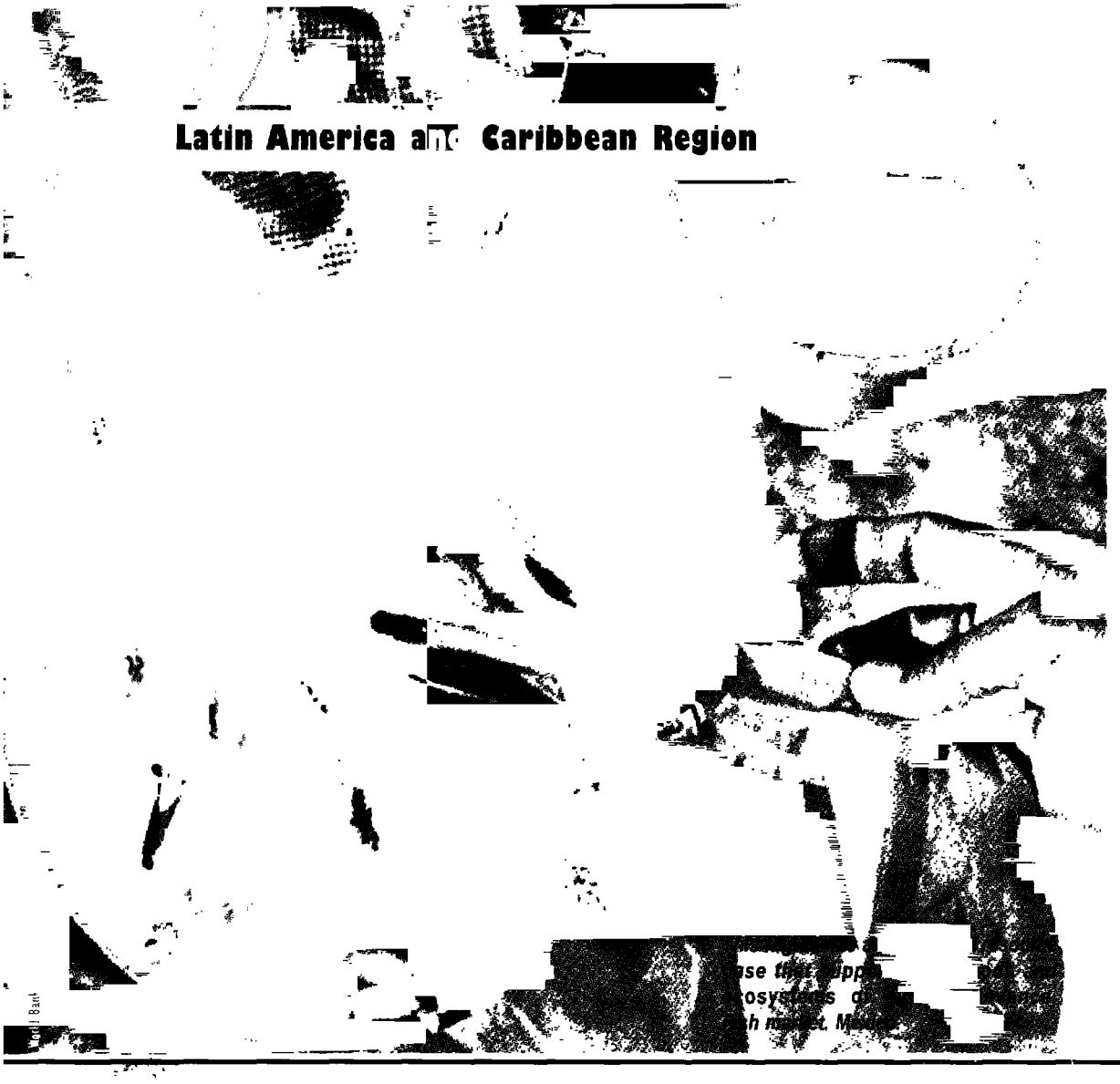
Latin America and Caribbean Region



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Venezuela

The Latin America and Caribbean (LCR) Region is highly urbanized, with 75 percent of the region's 500 million inhabitants living in cities and making a living in the industrial and service sectors, which together account for more than 90 percent of GDP. There is considerable diversity within the region, with large differences in terms of the percentage of people living below the poverty line (18 percent in Argentina, 50 percent in Nicaragua and Honduras) and the percentage with access to safe drinking water (65 percent in Argentina, 28 percent in Haiti).

The region has a rich natural resource base that supports livelihoods and ecosystems of global relevance. Environmental degradation continues to occur at an alarming pace. According to UNEP's recent *State of the Environment* report in 1998, 6 million hectares of tropical rainforest were cleared or went up in smoke, 1,211 vertebrates were in danger of extinction, and 300 million hectares of agricultural land had lost productivity due to soil erosion. Further, only two percent of wastewater is treated in cities such as Santiago and San Salvador, and the air-sheds of many of the major cities in the region fail to meet WHO standards. On the positive side, the rate of forest loss seems to have stabilized in much of South America, although in Central America it has increased slightly, to about 2–3 percent annually.

The key environmental issues and priorities in the LCR Region include (a) management of natural resources (water, soils, forests, fisheries, natural habitats) in areas of both existing and new settlement; (b) urban-industrial pollution (water, air, solid waste, hazardous wastes); (c) biodiversity conservation (terrestrial and marine); (d) environmental management capacity at the national, sectoral, and subnational levels; (e) management of environmental impacts of mining

and nonrenewable resources; (f) climate change; and (g) natural disaster preparedness, response, and mitigation.

Projects approved in fiscal 2000

Central America Land Regularization Projects. Rural land issues, which are similar in most Central American countries, arise from profound historical inequality and failed agrarian reforms that often lead to civil conflicts. The Bank response to these land issues has been focused on promoting peaceful outcomes, developing transparent mechanisms, strengthening property rights and streamlining agrarian reform, and supporting better land distribution. Lending operations for land have increased from a small $0.7 million land titling component implemented in the early 1990s to 10 current operations approved for $262 million. Another five standalone land operations for about $220 million are in the pipeline.

Brazil NEP II Project: The **Brazil Second National Environmental Project** (NEP II), approved in December 1999, builds on some of the successful features of the First NEP. One of these features is community management of environmental assets. Under the project, eligible states may request grant support from the Ministry of Environment for subprojects aimed at the protection or sustainable use of an environmental asset that has been determined to be a high priority in that state. Environmental assets are defined as features of the natural or built environment that provide services to human communities; some examples are the air-shed above a city, a body of water used for fishing or potable water, or a conservation unit such as a nature preserve.

Typically, grants will be made to stakeholder coalitions consisting of municipalities, state and/or federal government agencies, private-sector corporations, and NGOs. To be eligible, states must first demonstrate fulfillment of policy reforms representing improvements in their environmental management capacity. The higher the level of fulfillment, the larger the grant a state can receive. Thus, states have a financial incentive to improve their environmental management capacity.

NEP II is an Adaptable Program Loan (APL) with three phases. A scoring system measures the aggregate level of fulfillment of policy reforms by all the states. When the aggregate score of all states participating in the system is reached, the next phase is triggered and new loan funding can be released. States will be able to apply for more than one grant, but only by progressing to a higher level on the reform matrix.

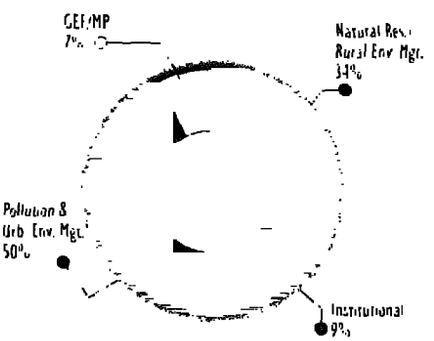
Brazil Energy Efficiency Project. This is an Adaptable Program Loan and GEF grant (totaling $58 million in the first phase) that is designed to reduce energy demand and greenhouse gas emissions and postpone construction of new generating capacity. It will include demonstration projects in eight states, activities to facilitate their replication, and capacity building. The first phase will demonstrate cost-effective measures in the electricity subsector through load management and targeted peak period reductions so as to better utilize existing facilities; enhance standards and labeling programs; and set up a market-based support structure for energy service companies. Phase II anticipates a 13 percent reduction in energy demand by 2015.

Indigenous Peoples' Development Project. The objective of this $5 million Learning and Innovation Loan (LIL) is to strengthen indigenous and Afro-Peruvian communities and organizations in five pilot zones through a learning-by-doing process. This will be achieved by (a) building the organizational and institutional capacity of indigenous and Afro-Peruvian communities and organizations as well as government institutions working with indigenous and Afro-Peruvian peoples; (b) revising the indigenous legal framework; (c) financing the preparation of community development subprojects; and (d) providing training and awareness-building activities regarding indigenous and Afro-Peruvian peoples' issues to government and civil society representatives.

The program's goal is for indigenous and Afro-Peruvian communities and organizations to have the capacity to design, develop, and manage their own development initiatives and projects, providing these communities with a greater sense of ownership and empowerment in managing their own development and helping to reduce the need for direct interventions by government entities.

Costa Rica Ecomarkets. In fiscal 2000, the World Bank approved a $33.9 million loan that—together with an $8 million Global Environment Facility grant—will support Costa Rica's National Forestry Financing Fund (*Fondo Nacional de Financiamiento Forestal*, or FONAFIFO).

Projects Active during FY2000 with Significant Environmental Objectives



This fund provides financial incentives to small- and medium-sized landowners to conserve primary forests, encourage sustainable management of secondary forests, and promote reforestation efforts throughout Costa Rica.

The Ecomarkets project—a partnership with the Government of Costa Rica, the Bank, and the GEF—aims to encourage private owners of small- and medium-sized parcels of ecologically valuable land to adopt or improve sustainable forest management practices, as well as to launch reforestation efforts using native tree species. It seeks to protect up to 150,000 hectares of forests across Costa Rica over the next five years.

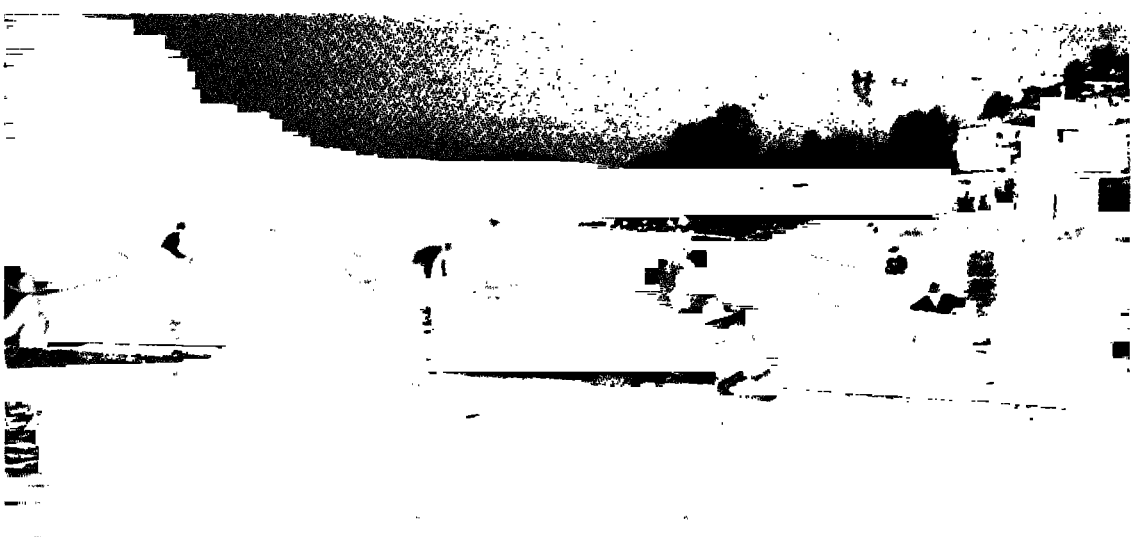
Mexico Renewable Energy for Agriculture Project. This project is designed to promote the use of renewable energy technologies (wind and solar) for productive purposes in the agriculture sector. Project components include (a) a promotion campaign targeting renewable energy for agriculture; (b) training to technicians, agricultural extension experts, and energy system vendors; (c) introduction of technical specifications and certification procedures for farm-based energy equipment; (d) installation of solar and wind-powered water pumping systems, and solar-powered refrigerated milk storage tanks, for participating farmers as demonstration units; (e) technical assistance to advise farmers on the new energy operation procedures; and (f) in four states, a pilot program to test innovative vendor financing mechanisms for farm-based energy systems.

Medium-Size Projects. Seven medium-size projects (MSPs) also were approved in fiscal 2000, including two in Peru (**Collaborative Management for the Conservation and Sustainable Development of the Noroeste Biosphere Reserve**; **Participatory Conservation and Sustainable Development with Indigenous Communities**), one in Colombia (**Conservation and Sustainable Use of the Marine Reserves of the Archipelago of San Andres**), one in Ecuador (**Choco-Andean Corridor**), one in Guatemala (**Management and Protection of Laguna del Tigre National Park**), one in Mexico (**Sustainable Hillside Management in Indigenous Micro-catchments in Oaxaca**), and one in Uruguay (**Landfill Methane Recovery Demonstration Project**).

Projects under preparation

Central America Barrier Reef. The objective of this regional project is to enhance protection of the ecologically unique and vulnerable marine ecosystems comprising the Mesoamerican Barrier Reef System (MBRS). This Bank/GEF-financed project, now in the final stages of preparation, focuses on transboundary issues that require regional solutions. A main objective of the project will be to assist the littoral states of Mexico, Belize, Guatemala, and Honduras to strengthen and coordinate national policies, regulations, and institutional arrangements for the conservation and sustainable use of this global public good.

The project is designed to (a) strengthen existing marine protected areas (MPAs) and establish new ones in transboundary locations within the MBRS; (b) develop and implement a standardized regional monitoring and environmental information system for the MBRS; (c) promote measures to reduce unsustainable patterns of resource use, focusing initially on the fisheries and tourism sectors; and (d) increase local and national capacity for environmental management through education, information sharing, and training.



Fishermen, Mexico.

World Bank

The project (totaling $17 million over five years, including $10 million from the GEF) has been designed as the first phase of a 15-year program to implement the Action Plan for the Conservation and Sustainable Use of the MBRS—a regional strategic framework developed in collaboration with partners in the region and with the full support of the littoral states. The project is expected to go to the Board in early December.

Special initiatives

Mesoamerican Biological Corridor. The Mesoamerican Biological Corridor (MBC) encompasses nearly 30 percent of Central America's territory, linking ecosystems, indigenous communities, and private lands in the longest continuous multinational sustainable development initiative in the world. Although it began as an effort to connect various national parks, it is now becoming a driving force behind the integration of development priorities and environmental agendas for the entire Central American region. The concept of the MBC has been evolving in the last few years from a focus on biodiversity conservation to a broader sustainable development framework.

The MBC is one of the world's most biologically diverse areas, and on this basis offers investment opportunities for the region ranging from ecotourism to pharmaceutical prospecting.

The Bank is preparing and supervising national and regional IBRD/IDA/IDF projects for almost $200 million that are related to the overall MBC initiative. The Bank serves as the implementing agency for nearly $40 million in ongoing national and regional GEF grants, with another $50 million in the pipeline. In addition, the Bank has provided more than $6 million in nonlending service activities to support consolidation of the MBC, including ecosystem mapping, environmental management, vulnerability assessments, and the development of a communications strategy.

The Central American Commission on Environment and Development (CCAD) and the Bank are working together to consolidate and mainstream the MBC by mobilizing resources to cover the costs of connecting the multiple ongoing activities at the national level, promoting public-private sector partnerships, and increasing the awareness of both the local and international communities about the value of the MBC initiative.

The Pilot Program to Conserve the Brazilian Rain Forest (PPG-7). This is a joint effort of the Brazilian government, Brazilian civil society, and the international donor community to reduce deforestation rates and promote sustainable development in these forests, which are critically important for biological diversity and ecosystem services such as carbon sequestration. Initiated in 1992, with first projects begun in 1994, it underwent institutional reform subsequent to the participants' meeting in November 1999. While the Bank retains its fiduciary role, the new arrangements provide for greater Brazilian leadership and ownership. Among other activities, the Sustainable Business Practices Project, which promotes sound business practices in the private sector, and the Atlantic Rain Forest subprogram are being designed for early implementation.

Clean Air Initiative. The main goals of the **Clean Air Initiative in Latin American Cities** are to (a) promote the development and enhancement of clean air action plans; (b) advance the exchange of knowledge and experience among all partners; and (c) foster public participation and the active involvement of the private sector for the accelerated introduction of cleaner technologies. Work is continuing on the technical and financial measures necessary for implementation of the Action Plans in the cities of Lima-Callao and Rio de Janeiro.

In fiscal 2000, two workshops were held. The first, in Rio de Janeiro, focused on air quality in the metropolitan area. The second, in Buenos Aires, considered priorities for better air-quality management and the need for intergovernmental coordination. Further, collaboration is underway between the World Bank and U.S. Environmental Protection Agency to jointly develop an Air Quality and Transportation Toolkit, and with partner Daimler/Chrysler for creation of an Information Pool for Clean Technologies.

New Environment Strategy Under Development in LCR

Within the general framework of the Bank's new corporate environment strategy, the Latin America and Caribbean Region is preparing a regional environment strategy. The work-in-progress proposes strategic criteria that will provide a reference point to assess future projects and analytical work in the region.

An extensive external consultation effort is under way. This includes (a) web-based consultations from August 2000 through early October 2000 (please join the discussion at http://wbln0018.worldbank.org/lac/ENVStrategy/AR/cover.nsf); (b) e-mail consultations to a large targeted audience of NGOs, the private sector, academia, and governmental agencies; and (c) smaller regional working sessions with key policymakers in the second half of September. Venues for the latter sessions will be San Jose, Costa Rica (covering Mexico and Central America); Santo Domingo, Dominican Republic (covering the Caribbean); Cartagena, Colombia (covering the Andean Countries); and Rio de Janeiro, Brazil (covering MERCOSUR countries).

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Middle East and North Africa Region

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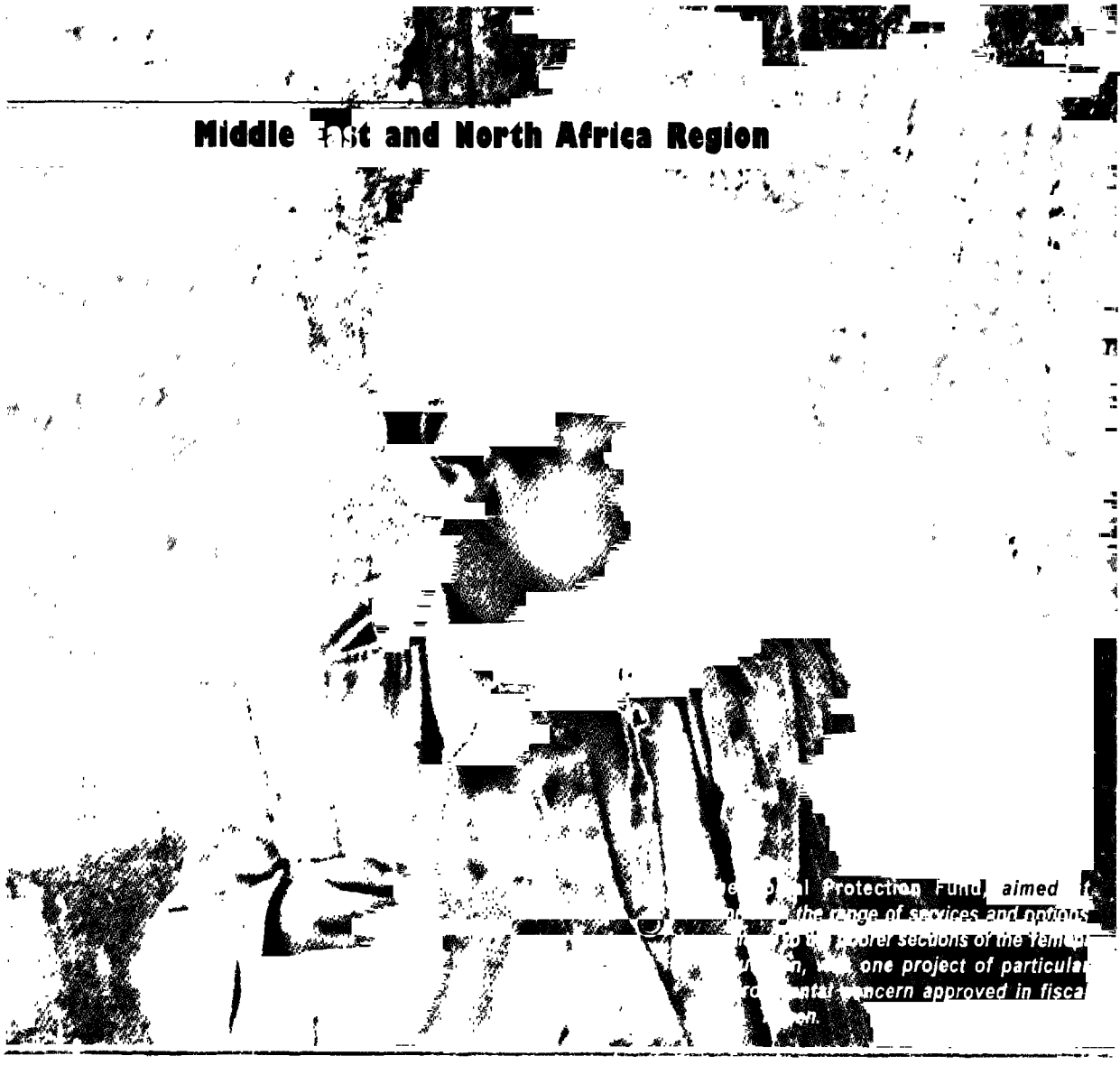
Oman
Qatar
Saudi Arabia
Syrian Arab Republic
Tunisia
United Arab Emirates
Yemen
West Bank and Gaza



As part of the World Bank's overall effort to establish a corporate environment strategy, the Middle East and North Africa (MNA) Region recently began to revisit its 1995 policy document *Towards Sustainable Development: an Environmental Strategy for the Middle East and North Africa Region*, to ensure its continued relevance. This process is on-going. After detailed consultation with both government and civil society in the MNA countries, it is expected to be completed in the late fall of 2000. The initial findings indicate that, with minor adjustments, the 1995 Strategy still points in the right direction through its three-pronged approach: (a) improving natural resources management; (b) arresting emerging pollution problems; and (c) strengthening environmental institutions and increasing public participation. However, in order to implement the corporate strategy, significant efforts in the following areas are required:

- Mainstreaming environment into all World Bank work, particularly in those sectors of key environmental concern in MNA—water resources management, soil degradation and desertification, waste management energy and transport;
  Strengthening national capacity for environmental safeguards and for monitoring and enforcement;
- Strengthening partnerships for addressing regional and global issues; and
- Focusing on environmental education and awareness as well as involving civil society and NGOs in designing and implementing environment-related projects.

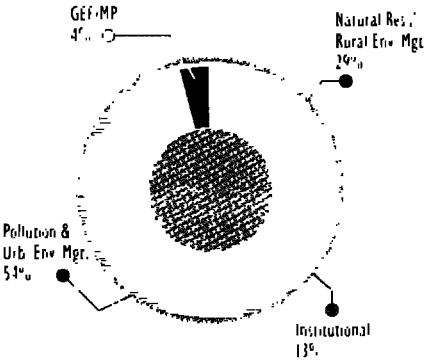
The Bank's lending portfolio

For MNA in fiscal 2000, the World Bank approved 21 investment projects for a total of $760 million in loans and $190 million in either International Development Association (IDA) credits or special credits to the West Bank and Gaza.

One of those projects, **Tehran Sewerage**, was in the Environmental Assessment (EA) Category A, which requires a comprehensive environmental impact assessment. Another 11 were in EA Category B, requiring substantive environmental review. In fact, approximately $500 million of the total $920 million approved in fiscal 2000 includes environmental components to be monitored during implementation. Projects of particular environmental concern approved in fiscal 2000 include:

- **Tehran Sewerage Project** (Iran). This is a $145 million category A loan that will improve environmental conditions by providing satisfactory wastewater collection and treatment for about 2.1 million of greater Tehran's 8 million people.
- **Ain Temouchent Emergency Project** (Algeria). This is an $83.5 million loan that will assist in restoring community infrastructure damaged by the December 22, 1999, earthquake in Ain Temouchent and increase national preparedness for future disasters.
- **Second National Drainage** (Egypt). This is a $50 million loan that is designed to increase the agricultural productivity of irrigated land by improving drainage conditions, thus avoiding yield loss due to waterlogging and soil salinization and thereby increasing rural incomes.
- **First Municipal Development Project** (Lebanon). This is an $80 million loan that provides community-driven municipal infrastructure, particularly targeting poor communities, and helps the government develop a longer-term municipal development strategy.
- **Protected Areas Management Project** (Morocco). This is a $9 million Global Environment Facility (GEF) grant that establishes a system of protected areas in Morocco and promotes participatory, sustainable conservation management of the ecosystems supported by the project.
- **Water Sector Investment** (Tunisia). This is a $100 million loan that promotes effective integrated water resource management by establishing and implementing a sound institutional framework and sector reform measures for demand management, as well as encouraging conservation of water resources and protection of the environment, thereby significantly improving the productivity of agriculture and access to safe water in rural areas.
- **Second Municipal Infrastructure Development** (West Bank and Gaza). This is a $7.5 million special credit that will rehabilitate vital urban infrastructure, including roads, water, drainage, and sewerage, and provide capacity building for emerging local institutions.
- **Social Protection Fund** (Yemen). This is a $75 million IDA credit that is aimed at improving the range of services and options available to the poorer sections of the Yemeni population through a combination of community development, capacity building, and micro-finance programs.

Projects Active during FY2000 with Significant Environmental Objectives



Nonlending services

Fiscal 2000 also saw an increased emphasis on mainstreaming environment into the nonlending services that the Bank provides. Of particular importance is the emphasis the MNA Region has placed on including environmental staff in the dialogues with countries on Country Assistance Strategies (CAS) and Comprehensive Development Frameworks (CDF). In fiscal 2000, the teams drafting the **Tunisia CAS** and the **Morocco, West Bank and Gaza**, and **Yemen CDFs** provided excellent examples of the right way to mainstream environment. Each of these documents fits into the overall strategy discussed above by explicitly addressing environmental problems facing the respective countries and outlining priorities for Bank assistance in mitigating those problems.

Under the Strategic Compact, the MNA Environment Cluster published *A Guide for the Preparation and Review of Environmental Assessment Reports*[2] as part of the Bank's overall effort to strengthen environmental safeguards in national environment agencies. Additionally, MNA took the lead in developing and implementing a program that strengthens the capacity of EA reviewers both within the Bank and throughout the region. As part of this program, Bank team leaders for infrastructure, health, rural development, and water projects were all trained on proper application of safeguard policies.

Additionally, the **National Environmental Action Plan (NEAP) for Syria** was completed. The **Algeria NEAP** is ongoing and is expected to be completed early in fiscal 2001. Both NEAPs are based on the overall MNA Strategy and make specific recommendations for improving the environment and promoting sustainable development for each of the countries.

Regional programs

The *Mediterranean Environmental Technical Assistance Program (METAP*[3]) continues to function as an instrument for operationalizing the MNA environment strategy, thereby assisting countries develop sound environmental practices. METAP played a major role in the Algeria and Syria NEAPS. In addition, the METAP Regional Facility (MRF) in Cairo, Egypt, is working with each of the METAP countries on building capacity for environmental management and in preparing specific investment projects like the **West Bank and Gaza Solid Waste and Environment Management Project**.

Regionally, METAP continued to provide training and information-sharing through a wide variety of instruments. Some of the fiscal 2000 highlights include the following:

- A *Regional Solid Waste Study* was completed and presented to government representatives from the beneficiary countries at an international conference in Cairo in February 2000, where a follow-on technical assistance project was developed and is being presented to donors for financing.
- The *MEDPOLICIES Initiative* completed a series of national case studies and follow-up policy roundtables on Trade and Environment, Privatization and Environment, or Economic Impacts of Air Pollution, and is now preparing a rapid assessment of the "Impacts of Environmental Regulations on Trade."
- The *EIA Initiative* (see box) completed its pilot phase for analyzing the environment assessment systems in several METAP countries and has established a Regional EA Center in Tunis to provide technical support, information dissemination, and training.
- The *Small Grants Facility for NGOs* saw the successful implementation of grants to four NGOs in Lebanon, which joined Turkey as the second country to benefit from this pilot initiative, which also plans activities in Algeria and Jordan.

More information about METAP can be found on the World Wide Web at **www.METAP.org**.

The MENA/MED Water Initiative. Efforts to promote regional collaboration with the European Union and the European Investment Bank (EIB) in the **MENA/MED Water Initiative** are intended to support the formulation and implementation of national water resources management policies in each of the MNA countries. A report on sustainable groundwater management was presented at a regional workshop in Sana'a, Yemen, in June 2000. Groundwater experts from relevant ministries (water, irrigation, and agriculture), university professors, and NGO representatives from the region conducted an open discussion on groundwater policy, regulatory approaches, and ways to increase bottom-up participation.

The Regional Dry Lands Management Project. The "Desertification Initiative" is another effort to bring together countries to exchange information and undertake research on dry lands. It continues to develop field activities and elicit donor support for developing solutions for natural resource degradation. As part of the Middle East peace process, this program links scientists and planners from Egypt, Israel, Jordan, Tunisia, and the West Bank and Gaza so they can share experience and expertise in desert land management. The second phase of the initiative was launched in fiscal 2000 and is expected to continue for the next five years.

METAP EIA INITIATIVE

The METAP Environmental Impact Assessment Initiative responds to the need for EIA systems, which are an important emphasis of the Euro-Mediterranean Partnership and the Bank's own safeguard policies. The initiative, designed to strengthen EIA systems in the METAP countries, has created an Environmental Assessment (EA) Center at the International Center for Environmental Technologies in Tunis (CITET). The overall goal is to provide the region with a long-term venue for developing south-south and north-south cooperation, EIA on-the -job training, and information dissemination.

During the first phase, the initiative conducted assessments of EA systems in METAP countries, including Albania, Croatia, Egypt, Jordan, Tunisia, Turkey, and West Bank and Gaza. The results from the assessments were used to develop training for stakeholders, including environment and sector ministries, private sector consulting firms, and nongovernmental organizations (NGOs).

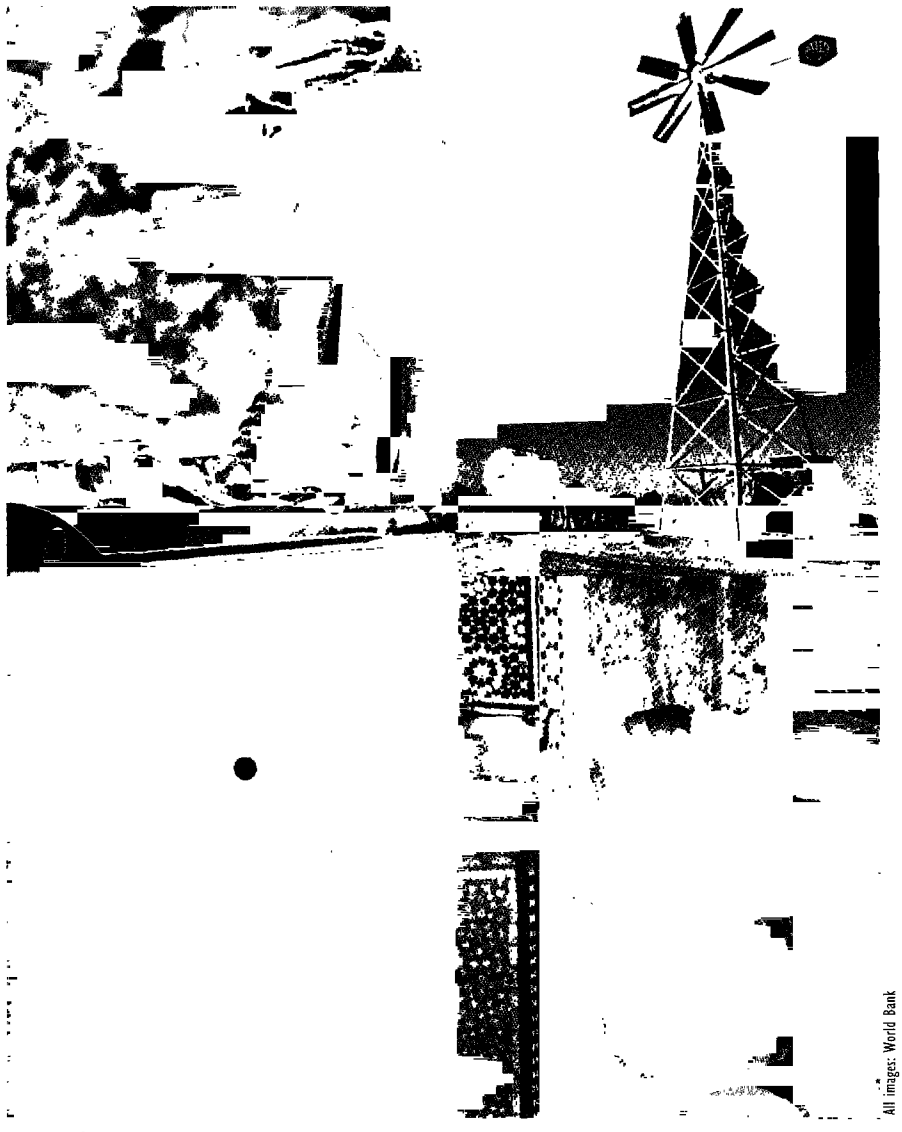
In November 1999, the initiative organized an international conference at CITET that included the directors responsible for EA procedures from all METAP Countries. Topics included:

- Presentation of the above-mentioned EA assessments;
- Strengthening communications among METAP countries on EA procedures;
- Fostering partnerships between METAP countries and donors, between METAP projects, and between countries interested in the same environmental themes, such as Mediterranean coastal preservation; and
- Continuing the exchange of information and lessons learned on EA.

The Initiative is an ideal forum to identify common concerns and issues related to EA and to facilitate EA training activities in the regions as well as to disseminate World Bank safeguard policies.

The Gulf of Aqaba Environmental Action Plan. This is another peace process initiative that links Egypt, Israel, and Jordan in collaborative mechanisms to strengthen capacity to protect marine biodiversity and the coastal zone. In fiscal 2000, the **Marine Park Action Plan** under this initiative was implemented.

The Red Sea and Gulf of Aden Environmental Strategic Action Program (SAP). This $19 million Global Environment Facility project is being jointly executed by the World Bank, UNDP, and UNEP through The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA), which is based in Jeddah. This partnership of the littoral states—Djibouti, Egypt, Jordan, Saudi Arabia, Somalia, Sudan, and Yemen—and international agencies aims to preserve the fragile environment by preventing pollution and unplanned coastal development in one of the world's most pristine marine environments. In fiscal 2000, the SAP made significant progress towards re-surveying portions of the Red Sea and Gulf of Aden in order to improve navigation safety.



All images: World Bank

Images from the Middle East and North Africa, clockwise from upper left: Auto-repair work, a windmill, gathering water, and a moonrise.

Future challenges — Environmental mainstreaming and ensuring compliance

In addition to participating in the development of the corporate environment strategy, MNA's challenge is to translate its strategic statements into directly operational actions. This involves further efforts to better integrate environment into the CAS/CDF; providing upstream technical and policy support to countries and task teams to improve the design and implementation of environmental components in the Region's operations; and giving special attention to global environment issues. The Region will also work closely with its clients to increase the involvement of civil society and local NGOs in the design and implementation of community, social, and educational development initiatives. In parallel , MNA would continue to strengthen the capacity of its own environmental staff, as well as the environmental staff of national agencies, in environment safeguards. It will also follow up on the implementation of environmental management plans in its operations.

1. World Bank Report #13601-MNA, February 17, 1995.

2. Copies are now available in English and French. An Arabic version will be available in the coming months. To obtain copies, please write or email the author at the address listed below.

3. METAP serves 13 Mediterranean countries and is sponsored by the World Bank, the European Commission, the European Investment Bank, UNDP, and the Swiss Development Cooperation. METAP beneficiary countries in the MNA region are Algeria, Egypt, Jordan, Lebanon, Morocco, Syria, Tunisia, and West Bank and Gaza.

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South Asia Region

Afghanistan
Bangladesh
Bhutan
India
Maldives
Nepal
Pakistan
Sri Lanka

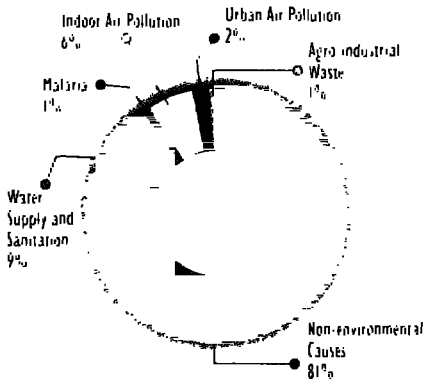
Despite impressive economic growth in recent years, South Asia still has persistent—even increasing—levels of poverty.

With about 1.3 billion people, South Asia is home to almost 22 percent of the world's total population. Despite impressive economic growth in recent years (averaging 5.5 percent GDP growth over the past decade), South Asia still has persistent—even increasing—levels of poverty. Between 1987 and 1998, the population living on less than $1 per day rose from 474 to 522 million, or about 43 percent of the world's total of 1.2 billion. Similarly, the population living on less than $2 per day rose from 911 million to almost 1.1 billion, or about 39 percent of the 2.8 billion global total. About 80 percent of poor people live in rural villages; amongst poor people, women, tribal people and scheduled castes in India are the most disadvantaged. Of the roughly 1 billion people to be added to the world's total population over the next 15 years, one third will be born in South Asia—implying that poverty reduction will continue to be the region's most fundamental challenge.

Environmental problems in South Asia are enormous, ranging from widespread resource depletion and ecological degradation to indoor and urban air pollution, urban and industrial waste, and natural disasters. For example, in the case of health issues alone in India, environmental factors play a role in approximately 19 percent of all illnesses and deaths (see *Figure,* page 51). Environmental health is a major health issue, second only to malnutrition and exceeding the current impact of other single health threats such as HIV/AIDS, tuberculosis, or cancer. On the natural resource side, land degradation, deforestation, fishery depletion, and water scarcity threaten the livelihood of nearly half the region's rural poor. Environmental problems, magnified by the inadequacy of governance structures in every country of the region and at all levels, cause substantial loss of life and threaten the livelihoods of millions of people.

In the South Asia Region of the World Bank, the term "environment" is primarily thought of in terms of the productiv-

The burden of disease in India — Environmental factors (percentage of DALYs lost)



Note: Morbidity and mortality estimates can be aggregated into a single health impact measure called DALYs (disability adjusted life years). DALYs are a combination of (a) discounted and weighted years of life lost as a result of death at a given age and (b) disability as a result of morbidity, adjusted by severity. These numbers are more conservative than earlier estimates conducted for the 1993 *World Development Report*, which suggested that about 30 percent of India's loss of DALYs were the result of environmental causes as against 25 percent in China and 10 percent in the developed world.

ity and sustainability of natural resources contributing to livelihoods; the impact of pollution on human health; and the functioning of ecosystems to reduce people's vulnerability, especially of poor people. The South Asia approach is to pick from an "environmental toolkit" those tools that best serve the needs of poor people, and to address other aspects of the environmental agenda through effective partnerships with other environmental groups and donors. This does not imply a value judgment about the merits of other aspects of environmental work, only that resources can be expended most effectively by developing systematic partnerships with those better equipped to pursue less poverty-focused aspects of the environmental agenda.

Governance and empowerment

Refocusing our environment strategy to better contribute to poverty reduction outcomes (health, livelihoods, vulnerability) also requires supporting the emergence of institutions that can help empower poor people. Recent Bank experience—such as joint forest management in India, hill community forestry in Nepal, and irrigation user groups in India, Pakistan, and Sri Lanka—adds to the evidence that social capital and participatory processes are as crucial to poverty reduction as financial resources and development programs.

The emphasis on social capital development is part of our larger regional effort to support governance reforms that promote the emergence of "home-grown," transparent, and accountable institutions that can be trusted and relied upon by poor people. Environmental institutions in the region (including information systems and skilled human resources) are particularly weak, and need strengthening in order to more effectively contribute to development outcomes. Community-based natural resource management initiatives, coupled with policy reforms, are proving an effective mechanism to overcome many of these constraints. They can increase access to and improve the productivity of natural resources, and thereby contribute directly to the growth of community-controlled assets (see *Box*).

Enhancing project quality through safeguard policies

The overall focus in the Region is on enhancing project quality by aiming for the most appropriate environmentally sustainable outcomes. This incorporates, but goes far beyond, the more narrow concern of simply ensuring compliance with environmental safeguard policies. It gives importance to greater multidisciplinary brainstorming on initial project concepts, and to early consideration of design options to achieve greater sustainability. Nevertheless, the Bank's safeguard policies set minimum "standards" below which the Bank will not get involved (similar to the practice in any financial institution).

The shifting nature of Bank lending operations toward a greater emphasis on programmatic lending has enhanced our promotion of strategic (sectoral and regional) environmental assessments to ensure adequate attention to environmental safeguards and good practice. Examples include sectoral assessments for energy reform projects in India and regional assessments for watershed projects in India. The Region is also fo-

Focusing on the Rural Poor

Forestry projects in the last decade have demonstrated the ability to target the rural poor through interventions such as community-based forest management, including joint forest management (JFM). Community groups are formed with the express purpose of improving the forest by involving all forest users. Invariably, this will target poor people, tribal groups, and landless people, since they are the main users of the forest. JFM initiatives have been tried in several Indian states. In West Bengal, studies found that 95 percent of the families participating in JFM were poor in absolute and relative terms and that more than half of the members are from scheduled tribes or castes. In Madhya Pradesh (MP), about 30,000 villages (40 percent of the state population) are located in or near forests. MP has one of the largest tribal populations in the country; the vast majority depend on forests for subsistence needs and supplementary income from sales of forest produce. In Andhra Pradesh (AP), 60 percent of the State's forests fall within the "tribal belt" and development concerns are coordinated through the Tribal Welfare Department. The JFM program has identified and formed about 7,000 groups covering all accessible areas of forest, and tribal development has been a cornerstone of the program.

Source: South Asia Natural Resource Strategy 2000.

cusing on integrating social and environmental assessments, given the intertwined nature of the issues involved. Such combined environmental and social sectoral assessments for transport, urban, and rural development projects are now routinely being conducted in the South Asia Region. SAR is also placing a strong emphasis on environmental monitoring and evaluation, taking advantage of modern information management tools and human resources in the South Asia Region.

Also, mindful of the fact that development aid will not work where policies are inappropriate, and that imposing conditionalities is not an effective way to ensure adequate compliance with the Bank's safeguard policies, the South Asia Region of the Bank is placing a strong emphasis on local ownership and consensus-building among its clients. In this context, our current activities address the following common generic weaknesses that usually manifest themselves in the region:

- Weak capacity to identify, characterize, manage and/or mitigate environmental and social risks associated with projects;
- Lack of basic regulatory frameworks and adequate institutional arrangements to ensure proper evaluation of social and environmental risks;
- Lack of human and financial resources, which often hinder effective management of environmental and social risks associated with project development even when relatively advanced legal and regulatory frameworks exist; and
- Lack of political will or ability to enforce compliance with national requirements.

Management-oriented training programs are being designed to strengthen environmental and social assessment capacities among central and state governments' environmental staff, municipal development fund companies, and financial intermediaries. A modest beginning is being made in India to strengthen the implementation of India's Environmental Impact Assessment (EIA) policies through the **Environmental Management Capacity Building Project**. In Sri Lanka, the institutional development project is supporting the streamlining and modernization of the EIA and environmental licensing procedures. In Bangladesh, safeguards policy work is strengthening environmental focal points in all of the sectoral ministries and agencies that impact the environment.

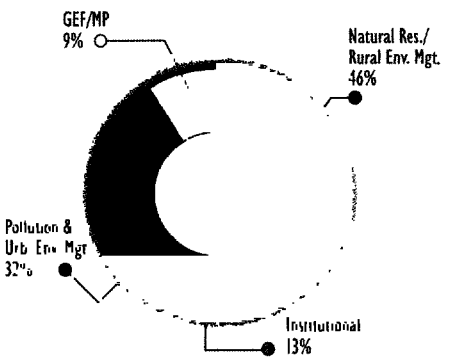
In the future, SAR plans to improve its portfolio tracking to provide early signals on the implementation of key project-related environmental management plans, and initiate wider sharing of cross-country and regional experiences by carrying out thematic reviews and training on the effective implementation of safeguard policies.

Project portfolio and analytical work

The World Bank's South Asia regional environment strategy continues to focus on achieving poverty-related outcomes by supporting initiatives, programs, and policy reforms targeted to:

- Improve livelihood systems through better management and improved productivity of natural resources; support for institutional reforms and improved governance; improved infrastructure and access to agricultural technology; access to credit and energy, education and information services; and support for initiatives to eliminate the "gender gap" and foster inclusive institutions. Examples include several projects in India focusing on land degradation, watershed management, and community forestry; a series of projects in Bangladesh focusing on water resources and fisheries management; and two projects in Pakistan addressing both water and forestry resources issues. In addition, analytical work is being pursued to strengthen our understanding of rural poverty and environment links.
- Reduce exposure to indoor and outdoor air pollution; provide access to safe and reliable drinking water supply, sanitation, and solid waste services; and support mass hygiene and education programs. The portfolio of rural water supply and sanitation projects has been accelerated in India and Bangladesh, in part by the striking empirical evidence of the incidence of disease and death associated with dirty water and lack of access to sanitation. In addition, the widespread arsenic problem in Bangladesh is being addressed both technically and institutionally through a water sector reform process. A growing program in the area of environmental health is described below.
- Reduce vulnerability to natural and environmental disasters through support for changes in land-use planning, disaster preparedness, community involvement and edu-

Projects Active during FY2000 with Significant Environmental Objectives



cation, and emergency phase interventions. Examples are the **AP Emergency Cyclone Project**, the **Bangladesh Coastal Embankment Project**, and the GEF-funded regional Bay of Bengal project preparation grant.

As shown in the pie chart, the environment-related lending in South Asia is well distributed across the major thematic areas: 32 percent in the "brown" sectors, 46 percent in the "green" sectors, 13 percent for institutional capacity building, and 9 percent for global concerns (based on Bank lending levels). New projects this past year include a large **Ozone-Depleting Substance (ODS) Production Sector Gradual Phase-Out Project** in India (the third such production sector project in the world, after similar ones China and Russia); two GEF-funded projects in Bangladesh (**Fourth Fisheries** and an ADB-implemented **Sundarbans** project); and an **Urban Development Project** in Bhutan. Not listed in the table are the newly approved **Air Quality Management** project in Bangladesh (approved in July, and hence in fiscal 2001), and the **Uttar Pradesh Fiscal and Governance Reform** loan, with a component devoted to the environmental aspects of public enterprise privatization and closure.

One of the most important implications of the Region's poverty focus is that it requires mainstreaming environmental concerns into sectoral and cross-sectoral programs. Poverty impacts must be looked at holistically. Therefore, the region's environment-related lending is increasingly integrated with the operations of the health, infrastructure, energy, rural, and economic management sector units. Compared to the recent past, there are few stand-alone environment lending projects in the pipeline.

About 13 percent of the current environment-related portfolio is geared toward institutional strengthening and reform. The major thrusts of these technical assistance activities are (a) improved information as a basis for improved priority-setting; (b) increased decentralization of environmental management to the state/provincial and municipal levels; (c) increased public sector accountability through improved public disclosure; (d) increased private sector participation and clear responsibilities; (e) strengthened safeguard policies as part of the governance and reform agenda; and (f) increased public education on environmental concerns.

The South Asia Region's lending for environmental objectives is closely associated with its analytical and advisory work in the region. Topics covered are:

- *Environmental health.* A growing environmental health program (in collaboration with the Bank's health, energy, infrastructure, and rural units, as well as the U.S. Centers for Disease Control) is focusing on both the health impacts and cost-effective abatement measures for the region's main environmental hazards. Specific cross-sectoral work was started last year on a **Clean Air and Fuels** program in Sri Lanka, and on urban and rural energy-related issues in India and Bangladesh. Research was completed on water supply and sanitation-related health impacts in India.
- *Poverty and environment linkages.* This work focuses primarily on case studies of rural resource use, the economics of interventions, and the promise of community empowerment.
- *Area-based strategies.* This incorporates priority-setting and institutional and policy reform. Specific examples are the **State Environmental Action Plan** in Gujarat, the **Environmental Management Framework** in Uttar Pradesh (a reforming state in India), and the revised **Pakistan Environmental Strategy**.
- *Global outcomes.* In this area, the focus is on improved understanding of the overlaps between local and global environmental outcomes in both the climate change and biodiversity areas.

Looking Ahead

The Region's poverty-focused environment strategy is starting to take hold, not only as evidenced by the listing of current activities but more fundamentally in the mindsets of colleagues within and beyond the Bank. The emphasis on poverty makes improved knowledge concerning how environmental issues affect the welfare of people in South Asia particularly important. There is a high premium on making cross-sectoral institutional connections—not only across the Bank's own sectoral units, but within counterpart governments, and across donors.

As a result, a long-term priority will be SAR's information and knowledge base and communications strategy on how to best disseminate that knowledge. The power of internet technologies and public access is revolutionizing not only work within the Bank, but is offering new tools to improve governance, make effective use of resources for decision-making, improve human resources development, and empower people in the fight against poverty. This is increasingly reflected in the Region's work related to industrial pollution, air quality, forestry management, and water use and river basin management. The environmental sector is indeed one area where knowledge, perhaps more than money, will lead to sustainable improvements.

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Multilateral Investment Guarantee Agency

The Multilateral Investment Guarantee Agency (MIGA) was established as a member of the World Bank Group in 1988 to address shortcomings in the investment insurance (guarantee) industry and provide a risk-mitigation service that was not readily available elsewhere. MIGA was authorized to establish (a) an investment insurance (guarantee) program, which provides political risk coverage to foreign investors from any of its member countries; and (b) a technical assistance program, which assists developing member countries in attracting foreign direct investment. MIGA neither invests nor lends money to investors, nor does it propose or design projects. Like any other form of insurance, investors and lenders who want this coverage pay premiums.

World Bank

Windmill, Kenya.

It is MIGA's policy that all the investments it facilitates through its guarantee program are carried out in an environmentally and socially responsible manner. MIGA has been applying World Bank environmental policies and guidelines to MIGA projects, often with the environmental counsel and advice of the IFC. In fiscal 1998 MIGA began drafting its own specific policies that reflect its business as an insurer of foreign investments. These draft environmental assessment and disclosure policies, and the procedures for implementing them, were the subject of extensive discussions in fiscal 1999 by MIGA's Board and management. In May 1999, the Board approved MIGA's environmental assessment and disclosure policies and procedures, which took effect with all new applications received in fiscal 2000. The approved policies and procedures are available on MIGA's website (www.miga.org).

The environmental assessment policy formalizes an approach to environmental review that has been taken by MIGA for many years. The disclosure policy now encompasses the required disclosure by MIGA of environmental information for projects considered environmentally and socially sensitive (Category A projects). During fiscal 2000, MIGA's Board approved guarantees for three Category A projects (in mining and infrastructure) that were subject to MIGA's new disclosure policy.

In fiscal 2000, MIGA issued contracts of guarantees for 10 investments in the financial sector and for 24 projects in other (nonfinancial) sectors. Several of these projects are directly associated with renewable energy, clean energy, and energy efficiency. These included two geothermal power projects (Kenya and Nicaragua); four projects that increased energy reliability and efficiency by providing transmission line interconnectors (Brazil, Mozambique, and Peru); and one project for a new natural gas pipeline (delivering natural gas to industrial facilities in the vicinity of Vitória, Brazil).

Significant environmental improvements are expected to be achieved through two other projects that MIGA guaranteed in fiscal 2000. In a project in Zambia, slag waste from a copper smelter that has been operating since the 1930s will be reprocessed for cobalt, and redeposited in properly engineered and operated disposal facilities after cobalt extraction. In a project in Macedonia, a MIGA-insured investment in an existing cement plant will lead to discontinued production of asbestos-cement products.

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World Bank Institute Environment and Natural Resources Division

WORLD BANK INSTITUTE

The World Bank Institute's Environment and Natural Resources Division (WBIEN) works to facilitate a learning dialogue and disseminate innovative approaches to sustainable development, primarily among policymakers and opinion leaders. WBIEN staff include specialists in economic, institutional social, environmental, rural development, and other related fields. In fiscal 2000, WBIEN worked with different types of partners and audiences to address questions about sustainable development and globalization, including the following:

Integrating Environment Into Poverty Reduction Strategies. WBIEN staff contributed to the environment chapter of the *Poverty Reduction Strategy Papers Sourcebook.* This chapter offers guidance on (a) integrating environmental considerations into policy dialogues and strategy formulation; (b) considering the effects of environmental interventions on poverty; and (c) evaluating the effectiveness of interventions across sectors such as forestry, water and sanitation, and health.

Scaling Up the Clean Air Initiative. WBI has been working with partners within and outside the Bank since 1998 on urban air quality management in Latin America, Africa, and Asia. WBI is committed to such a program and to playing a leading role in facilitating the coordination of all nonlending activities related to urban air quality management. Highlights of the program in the Latin America and Caribbean Region included city-specific workshops in Rio de Janeiro and Buenos Aires, which led to the ongoing preparation of city action plans for urban air quality management.

Environmental Economics for Development Policy. In July 1999, the annual core course on Environmental Economics for Development Policy was held for the second time. It attracted 49 participants—senior policymakers, academics, NGOs, and private-sector representatives—from 33 countries. Designed to address the challenge of mainstreaming the environment in the policymaking process, the course highlighted current economic thinking and practice in addressing resource and environmental problems at the macro, sector, and project levels.

WBI Environmental Training Course in China. In October 1999 in Shenzhen, China, ESSD Vice President Ian Johnson delivered a public seminar entitled "Development Framework for the 21st Century: The World Bank and China's Environment" to about 150 participants on the closing day of the two-week core course on Environmental Economics and Policy (EEP). The course was cosponsored by WBI and State EPA of China (SEPA), and exposed participants to the technical and analytical tools that underline decisionmaking in the arena of environment and development policies.

Making Water Everybody's Business. Building on WBIEN's Media and the Global Environment program, this composite program held in February–March 2000 addressed increased and improved press coverage of sustainable development issues in the water sector in Africa. The activity included (a) a workshop—"Making Water Everybody's Business"—attended by 32 journalists from nine African countries; (b) an electronic discussion among participants immediately following the workshop; and (c) participation in the Second World Water Forum in The Hague. On average, each journalist has published or aired at least 10 water stories since the workshops, totaling more than 250 stories.

Regional Cooperation for Strengthening Environmental Compliance and Enforcement in Asia. In response to client and partner requests and in line with WBI's extensive efforts to address governance issues, this meeting in Bangkok in June 2000 launched WBIEN's new program on Environmental Compliance and Enforcement. The program aims to strengthen national capacity for environmental compliance and enforcement and identify approaches for promoting regional cooperation in this field.

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Implementation of the World Bank's GEF program

Since the 1992 UN Conference on Environment and Development, the Global Environment Facility (GEF) has emerged as a facilitator and a funding mechanism for integrating global concerns into the development process. After a three-year pilot phase, the GEF was restructured in 1994 to provide for universal membership, greater transparency and participation in its affairs, and to serve as financing mechanism for the global conventions on biodiversity and climate change. Together with the UNDP and UNEP, the World Bank Group (WBG) has served as an implementing agency for the GEF.

In total, Bank management has approved 180 GEF-financed projects in about 70 countries for a total of $1.23 billion in GEF funding, with cofinancing of $1.39 billion in IBRD/IDA funding and $4.1 billion from other sources. The WBG-GEF portfolio includes 125 full projects, 35 medium-sized projects, and 20 Enabling Activities.

In fiscal 2000, the Bank's GEF program reached a new all-time high of $280 million in GEF grants approved by the GEF Council, representing a 12 percent increase over the previous year. In 37 projects, these funds complemented Bank lending and other cofinancing resources, primarily in the areas of conservation and sustainable use of biodiversity and the promotion of energy efficiency and renewable energy development. They included 17 "medium-sized" projects, each of $1 million or less in GEF grant financing, which are designed to build partnerships with NGOs and support flexible and innovative approaches to the adoption of globally sustainable resource management practices.

GEF's focal areas

GEF assistance covers four focal areas: biodiversity, climate change, international waters, and the ozone layer. The Bank's GEF portfolio is dominated by projects focused on biodiversity and climate change, which together account for more than 75 percent of the WBG-GEF grants.

- *Addressing Climate Change.* The Bank's portfolio of GEF climate change projects now stands at 44 projects at a total cost of $4.6 billion, including GEF financing of $453 million and funding from the Bank of $1.02 billion, as well as from private partners and government counterparts of about $3.1 billion. The majority of projects aim at removing barriers to energy efficient technologies and energy conservation measures and at removing barriers and reducing the implementation costs of renewable energy technologies. During fiscal 2000, the GEF Council approved the **Energy for Rural Transformation Project** in Uganda, which is the first project under the GEF-WBG **Strategic Partnership for Renewable Energy**.
- *Conservation and Sustainable Use of Biodiversity.* The Bank's portfolio of GEF biodiversity projects now stands at 107 projects at a total cost of $1.44 billion, including GEF financing of $480 million and funding from the Bank ($301 million), as well as from private partners and government counterparts of about $657 million. The greater part of the portfolio supports the establishment of new protected areas and the strengthening of management at existing areas. Mechanisms for financing biodiversity conservation (and thereby increasing its sustainability) play a key role in the WBG's GEF biodiversity program. These include environmental trust funds (Bhutan, Bolivia, Colombia, Mexico, Papua New Guinea, Peru, South Africa, and Uganda), creating markets for ecosystem services, and developing innovative ways for financial intermediation or investment funds. A fast growing segment of the portfolio covers the management of biodiversity outside protected areas through habitat protection and restoration, eradication of alien species, and biodiversity conservation through improved management and sustainable use of natural resources in the production landscape.
- *Protecting the Ozone Layer.* Since 1991, the WBG has committed $125 million in GEF funding to help enterprises in the transition economies of Central and Eastern Europe and the former Soviet Union convert to ozone-friendly technologies. These endeavors should lead to the elimination of more than 80 percent of the overall CFC production in developing countries and countries in transition. With the expected completion over the next few years of national ozone-depleting substances phaseout programs for these countries, the WBG-GEF ODS program will come to an end.
- *Fresh and Marine Water Resources Management.* The Bank's portfolio of GEF international waters projects now stands at 15 projects at a total cost of $363 million, including GEF financing of $146 million and funding from the Bank ($68 million), as well as from private partners and government counterparts of about $148 million. The Bank has worked with the GEF and other partners to

actively support development and implementation of regional conventions for the management of international river basins, shared lakes, regional seas, and shared groundwater aquifers. During fiscal 2000, the WBG presented to the GEF Council a proposal for a **Strategic Partnership for Nutrient Reduction in the Black Sea/Danube Basins**. The funds under this umbrella investment program would include $70 million in GEF grant financing and would leverage significant national and international investments to address the serious eutrophication problem in that area.

The WBG is responding to land degradation and desertification through a large lending program ($1.8 billion in the past decade). GEF funding helps ensure that the design and implementation of these projects contribute to conserving biodiversity, securing carbon sinks, and reducing carbon emissions.

GEF's leverage

The WBG's GEF financial commitments are small relative to the size of global environmental problems. However, the Bank can leverage action for global environmental management by mobilizing resources, promoting technology transfers, and fostering and strengthening partnerships.

For every $1 of Bank-GEF assistance provided, there is an associated $1 of IBRD/IDA resources as well as $2 of cofunding from other donors, foundations, and the private sector. In the Lake Victoria Environment Program in Africa, for example, the prospect of additional GEF support led the three riparian countries to agree in 1994 on a priority action plan to reverse serious ongoing environmental degradation. The $35 million GEF grant was instrumental in mobilizing matching funds from IDA to help finance priority investments addressing pollution "hotspots." Other bilateral donors followed by expanding their assistance for environmental management of the lake and its ecosystem.

A $26 million GEF grant directly financed 41 megawatts of wind turbine installations and strengthened the capabilities of the India Renewable Energy Development Agency to promote and finance private-sector investments; more than 270 megawatts of wind projects were financed through this agency.

Mobilizing the Private Sector. The WBG has played a major role, through the involvement of the IFC, in seeking to redirect and mobilize private capital, expertise, and privately held technology to more effectively serve the objectives of the GEF. For example,

- The IFC has joined with several other private and public sector groups to invest in the Renewable Energy and Energy Efficiency Fund, the first global private equity fund devoted exclusively to investments in renewable energy and energy efficiency projects. The fund will also have access to a unique co-financing arrangement with up to $30 million in concessional funds from the GEF.
- The Solar Development Group (SDG), the result of a joint initiative between the World Bank, IFC, CEF, and a number of charitable foundations, has been established to further stimulate development of a viable market for solar home systems using solar photovoltaic technology in rural regions of the developing world. The SDG has a target capitali-zation of $50 million, of which more than $25 million has been committed from the World Bank, the IFC, the GEF, and foundations.
- IFC's **Photovoltaic Market Transformation Initiative** (PVMTI) is leveraging $30 million in GEF funds to finance private sector PV market development projects.

Looking ahead

Several lessons and associated challenges will influence the further growth and mainstreaming of the GEF in overall WBG development assistance programs:

First, the WBG will need to strengthen its capacity to link GEF funding and local development priorities. The global environment and the GEF are still frequently looked upon as a separate and externally driven agenda. This calls for a program to strengthen and accelerate in-house and client training.

Second, the WBG will explore modalities for linking GEF funding more programmatically to the WBG's country assistance dialogue and lending program. GEF projects need to be placed in the broader sectoral development context and its related environmental management priorities. The WBG-GEF Strategic Partnerships on Renewable Energy Technology Development and Nutrient Reduction illustrate the way forward.

Third, the WBG will seek to expand partnerships in order to live up to its own expectations and those of others regarding its role in transferring concessional funding to client countries for global environmental objectives. A high priority is the development of arrangements for multilateral (especially the regional development banks) and bilateral donors to assume responsibility for developing and implementing GEF projects.

Finally, recognizing that the greatest potential for action on global environmental issues is in the private sector (from corporations to communities), the WBG will accelerate its efforts to engage the private sector more effectively. This will include creative mechanisms for funding conservation and sustainable use and conservation of biodiversity, as well as supporting other ecosystem services, including carbon management.

This article was prepared by Rohit Khanna of the Environment Department's Global Environment Facility Team, (202) 458-2685, fax (202) 522-3256. Website — http[illegible]org.

Prototype Carbon Fund

One of the difficult challenges facing the global community is how to cost-effectively reduce carbon emissions to avert the worst impacts of climate change. Under the Kyoto Protocol, which guides implementation of the Framework Convention on Climate Change, industrialized countries must reduce their carbon emissions to at least 5.2 percent below their 1990 levels by the end of 2012.

To meet these commitments in the most cost-effective manner, the Protocol contains provisions allowing industrialized countries some flexibility to meet their emissions reductions obligations though trade with developing countries and transition economies. Two provisions are particularly important:

- Article 6 allows for the "joint implementation" of projects by industrialized countries, including those with economies in transition. Under this provision, Country X invests in a project that will reduce greenhouse gas emissions or improve their absorption in Country Y. In return for its investment, Country X would acquire the resulting emissions reductions, which it could use itself or sell.
- Article 12 provides for similar project-based carbon offset trading between industrialized and developing countries under the so-called Clean Development Mechanism (CDM). The purpose is to assist developing countries with sustainable development through the transfer of cleaner technology and financial resources for specific projects, while at the same time contributing to the objectives of the Convention by lowering carbon emissions.

The World Bank's Prototype Carbon Fund (PCF) is an attempt to understand the process and procedures for creating a market in project-based emissions reductions under the provisions for Joint Implementation and the Clean Development Mechanism. The PCF was established with investments from governments and private companies, and is advised by representatives of developing and transition economies, NGOs, and others. It will invest in cleaner technologies in developing countries aimed at promoting sustainable development and reducing greenhouse gas emissions. These emissions reductions will be independently verified and certified, and then transferred back to the Fund's investors in the form of emissions reduction certificates rather than cash.

The Bank will act as the broker in helping to negotiate a reasonable price for both buyers and sellers of emissions reductions. In this way, developing countries will benefit by acquiring cleaner technologies and making them more profitable than their fossil fuel alternatives. Industrialized country investors will gain by paying a lower price for emissions reductions than are available in the context of their own companies or countries.

Experience from the current pipeline of PCF projects and the Bank's largely GEF-financed climate change mitigation projects suggests there are many opportunities to reduce emissions of greenhouse gases in developing countries at a cost of between $5 and $15 per ton of carbon. This compares with a marginal abatement cost that rises quickly to $50 per ton of carbon in advanced economies, and already exceeds this level in the most energy-efficient economies. It is the difference in cost to industrialized and developing countries that provides the opportunity for mutually beneficial trading relationships.

Investors in the PCF have expressed a willingness to pay on the order of $20 per ton of carbon (equivalent to about $5 per ton of carbon dioxide) as an outcomes price averaged across the portfolio. Hence, room appears to exist to enable the PCF to negotiate a price that covers risks to investors while providing adequate profit incentives for PCF investments to project sponsors in host countries.

Progress to date

On April 10, 2000, the Prototype Carbon Fund (PCF) achieved its first closing and formally began investment operations. Demand for the PCF has been so high that a second closing was made available for investors who wished to have more

time to complete their decisionmaking on PCF subscription. A second closing will be achieved at the end of September 2000.

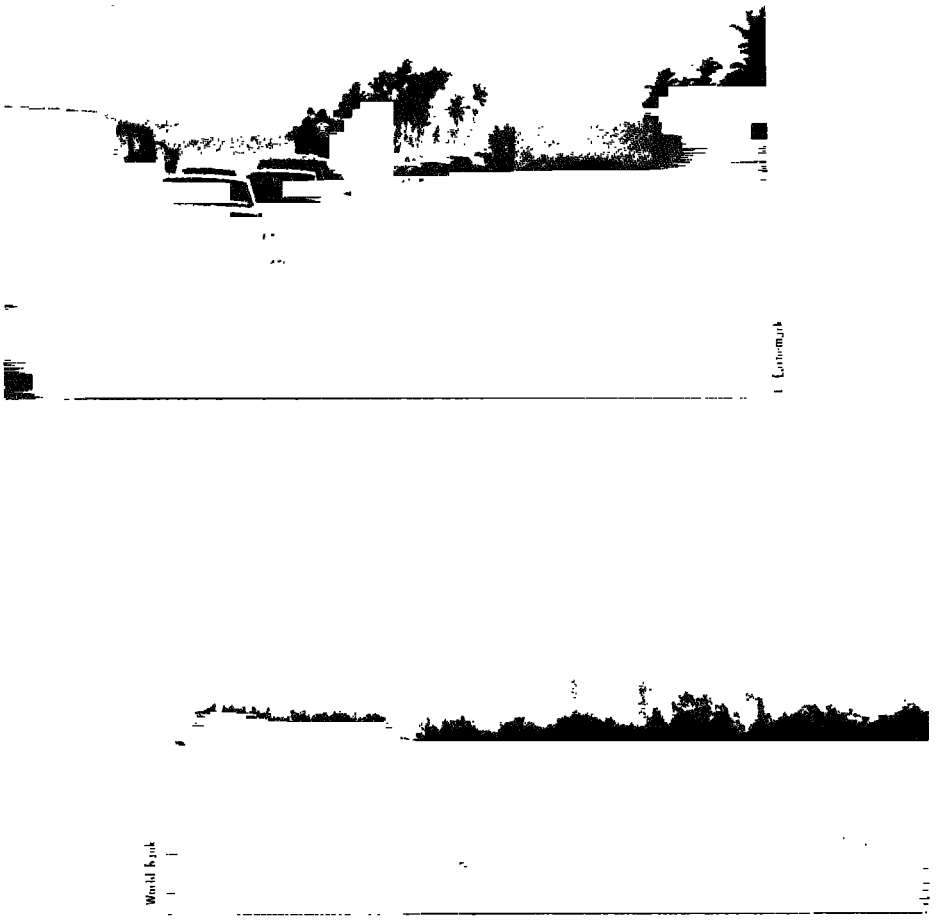
The PCF has already completed negotiations for an emissions reduction purchase agreement with the Government of Latvia. Under the *Solid Waste Management Project in Liepaja*, PCF resources will support an advanced form of municipal waste disposal to replace the open dumps now in use. Some 90 percent of the waste will be recycled and the methane emitted by the waste will be used to generate electricity. If the minimum emissions reductions anticipated in this project are achieved, the price outcome will be about $23 per ton of carbon.

The Fund's capital is to be in 20 or so projects by June 2003. To meet this investment rate, at least two-thirds of the projects need to be firmly identified by mid-2001.

Lessons learned

The PCF's experience extends beyond the Latvia project into the eight-plus investments under preparation. The most important lessons are:

- *Need for Streamlined Procedures for Small Projects.* PCF procedures are cost-effective for medium to large projects, but are likely to be prohibitively costly for projects less than about $10 million in total financing, or about $2 million in carbon financing. Yet for the majority of developing countries, projects of this size and less dominate their opportunity to participate in the CDM. If the CDM design is to include most developing countries, UNFCCC negotiators need to take this perspective into account when finalizing the rules of the game in The Hague in November 2000.



Top photo Traffic congestion Ghana Bottom photo Livestock grazing near factory Estonia

- *Need to Reduce Transaction Costs.* Through its parallel applied research arm and its own operations, the PCF is exploring a number of approaches to reducing transaction costs and increasing certainty for investors in small-scale emissions reductions activities.

- *Using Private Sector Capacity to Meet Private Investors Needs.* In the fields of baseline determination, validation, verification, and certification, private sector entities and associations can supply experience and capacity to support the Kyoto Protocol's implementation without the need for new intergovernmental institutions. Oversight by the Parties is essential to ensure that good practice is identified and systematically applied. Likewise, severe penalties are required to ensure adequate incentives for compliance.

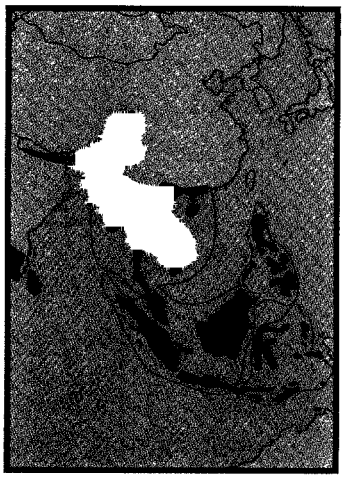
Information about how the PCF works is available to the public through the PCF website (www.prototypecarbonfund.org).

This article was prepared by Kenneth J. Newcombe of the Environment Department's Prototype Carbon Fund, (202) 473-6010, fax (202) 522-2130.

News Updates

■ CEPF

Bank Announces New Ecosystem Protection Fund



A new $150 million Critical Ecosystem Partnership Fund (CEPF) was launched in August 2000 to better safeguard the world's most endangered biodiversity "hotspots," where some 60 percent of all terrestrial species are found on only 1.4 percent of the Earth's land surface. The hotspots in South East Asia as shown in the map at left.

The fund is a partnership between the Bank, the Global Environment Facility (GEF), and Conservation International (CI). Each of the founding partners will contribute $5 million annually for five years. Additional supporters are being sought to achieve the CEPF target of $150 million over the next five years.

"We have to move fast to create realistic alternatives for poor people if we are to relieve the growing pressures on the environment," said World Bank President James D. Wolfensohn. "The Fund will help us find solutions that allow poor people to have a better way of life while at the same time conserving the biodiversity on which their long-term survival depends."

CI will oversee day-to-day management of the fund. To reach the people with the greatest stake in ensuring protection and the greatest ability to make it happen, the CEPF will work through community groups and nongovernmental organizations on the ground.

"This is a new source of money exclusively for local groups whose work is central to protecting the biodiversity hotspots," said Peter A. Seligmann, CI Chairman and CEO. "The aim is to help agencies and communities to pull together more effectively and have a greater impact. Too often the many ongoing efforts in the hotspots fail to deliver because people don't know what others are doing or because critical activities—often at the grassroots level—are not funded."

Investments will support training, transnational planning, local dialogue with extractive industries, conflict resolution, priority setting and consensus building, strengthening indigenous organizations, and facilitation of partnerships between the private sector and protected areas. During the first year of operation, the Fund's focus will be on the hotspot regions of Madagascar, West Africa, and the Tropical Andes. Each subsequent year, the Fund will invest in a minimum of five additional critical ecosystems.

■ ILWMI

Draft Action Plan for Land/Water Initiative in Africa

World Bank

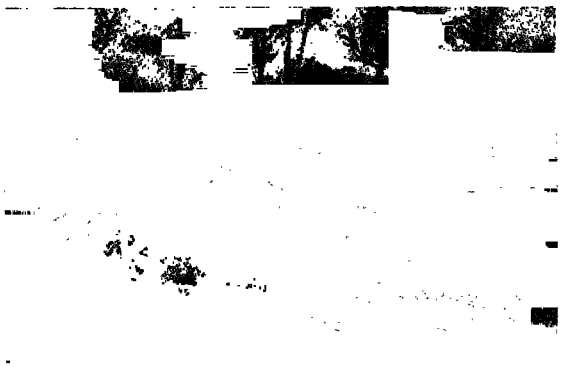
The **Integrated Land and Water Management Initiative** (ILWMI)—a joint effort of the Global Environment Facility, United Nations Development Program, United Nations Environment Program, and the Bank—was prompted by the urgent need to develop a holistic and integrated approach to reverse land and water degradation in Africa. Regional coordination is particularly critical in Africa, where land and water ecosystems frequently do not match the continent's political boundaries.

ILWMI's draft Action Program has three main elements: (1) establishing and collecting good practice and lessons learned; (2) building capacity for greater river basin cooperation and knowledge exchange; and (3) supporting high-level policy dialogue within Africa on integrated land and water management practices and policy instruments.

At its first expanded meeting in Nairobi in May 2000, representatives endorsed the draft Action Program as a working document and strongly recommended that the process henceforth be African-led in participation and interventions. It was also agreed that the Action Program should aim at consolidating and building upon existing priority programs and should be a building block for the implementation of the UN Convention to Combat Desertification (UNCCD).

■ POPs

Persistent Organic Pollutants Added to Global Agenda



The United Nations Environment Programme and other international institutions have been working since February 1997 to prepare a legally binding convention for international action to minimize releases of persistent organic pollutants (POPs). These chemicals are long-lived, can accumulate in organisms, and can build up to high levels in the environment and the food chain.

The forum for this effort is an intergovernmental negotiating committee (INC) convened by UNEP's Governing Council. The committee is initially considering 12 specific POPs, including some pesticides, certain industrial chemicals, and unintended byproducts, including dioxins and furans.

Delegates from over 100 countries have been attending the negotiations and are generally optimistic that the remaining issues will be resolved at the next negotiating session in December 2000 in Johannesburg.

The Bank has been following the negotiations closely and is initiating work, supported by the Government of Canada and others, to provide developing countries with capacity building assistance to address this issue.

For more information, contact Steve Gorman at the World Bank (202) 473-5865 or Jim Willis at UNEP (JWillis@unep.ch).

■

UN Marks 5th Anniversary of Social Summit

ESSD's Social Development Department coordinated the Bank's participation at a special session of the United Nations General Assembly in Geneva in June 2000, where more than 6,000 people gathered to mark the fifth anniversary of the historic 1995 United Nations World Summit for Social Development held in Copenhagen.

The final Summit document reaffirmed the goals of Copenhagen and went beyond the Copenhagen commitments. The commitments now include:

- Halving the number of those living in extreme poverty by the year 2015 (relative to 1990).
- Reducing HIV/AIDS infection levels in young people by 25 percent in the 25 African countries most affected by the disease by 2005.
- Achieving a 50 percent increase in adult literacy by 2015.
- Closing the gender gap in primary and secondary education by 2005.
- Supporting the Cologne initiative for the reduction of debt, particularly the speedy implementation of the enhanced Highly Indebted Poor Countries Initiative.

The Bank sponsored or participated in 26 panels. There was a high demand for the Bank's Summit flagship publication, *New Paths to Social Development: Community and Global Networks in Action*. This focuses on "social capital"—the concept that social relationships and networks are a form of capital that can benefit their members and influence the use of other assets. Increasingly, the study suggests, governments and international organizations such as the World Bank must cooperate with both community and global networks to achieve sustainable social progress.

For more information, visit the World Bank's Social Summit website: http://www.worldbank.org/socialsummit.

■ WB/WWF

Forest Alliance Promotes Forest Conservation and Best Practices

The **Global Alliance for Forest Conservation and Sustainable Use,** a partnership between the World Bank and the Worldwide Fund for Nature (WWF), is continuing to work toward its goals of creating new protected forest areas, improving management capacity at existing but threatened protected forests, and expanding the area of production forests under independently certified sustainable management.

In November 1999, the Alliance brought together more than 80 of the world's leading experts and stakeholders involved in forest management, production, and trade to share their experiences with certification and verification systems.

World Bank

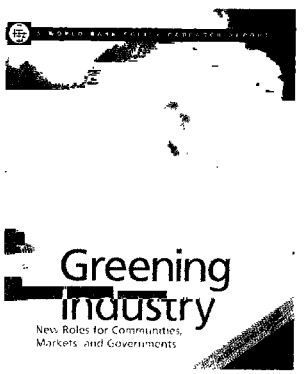
In addition, the Alliance has continued to promote more efficient use and increased productivity of forest resources, so that by 2050 most of the world's needs for industrial forest products could be derived from a comparatively small proportion of intensively managed global forests. This *Global Vision*—a joint project with the US Council on Foreign Affairs, the World Resources Institute, and the Rockefeller University—will lay out the basis for realizing a future where the health of global forests will be recovering and total global forest area will be larger than it is today.

■ DECRG

New Bank Report on Greening Industry

A recent World Bank report—*Greening Industry: New Roles for Communities, Markets and Governments*—describes innovative approaches to pollution regulation in developing countries.

Greening Industry shows how economic and regulatory policy reforms are reducing industrial pollution in developing countries without threatening economic growth. After many failed attempts to import regulatory models from the industrial countries, pioneers are developing a new model for pollution control. Based on sound economic principles, it incorporates market-based incentives, a broad commitment to public environmental information, and targeted assistance to managers who are trying to improve environmental performance. The new model stresses participatory regulation, with community representatives taking their place at the negotiating table along with government regulators and factory managers.



The report includes a CD-ROM, which provides a large set of reference materials, databases, and audio-visual presentations. An Internet version of *Greening Industry* is featured on the DECRG Website, "New Ideas in Pollution Regulation" (http://www.worldbank.org/nipr). The report can be ordered from the World Bank online (http://www.worldbank.org/html/extpb/howtoorder.htm).

■ Second World Water Forum

Government leaders and a wide range of interested partners gathered at The Hague in March 2000 for the Second World Water Forum to discuss all aspects of water resources management. The Forum featured a ministerial conference and a world water fair and technology exhibit.

One of the highlights of the meeting was the report of the World Commission on Water for the 21st Century, which was formed to call public attention to the global water crisis and to find solutions.

Speaking at the Forum, World Bank President James Wolfensohn emphasized the magnitude of the challenge facing the world. By 2025, he noted, the world will need 40 percent more water for cities and 20 percent more for food. Yet, he added, in many areas the environment already is overstressed.

The Forum generated wide interest and considerable debate. The Bank is following the outcomes of the Forum and continuing its dialogue with many of the participants.

■ Green Procurement

Discussions on "greening" of procurement processes have taken place between environment and procurement specialists from the World Bank, the Asian Development Bank, and other international financial institutions, as well as the Consumer Choice Council. Matters being addressed include review of public and private good practice in this area, promotion of eco-labeling and green certification systems, expansion of the use of graylists and blacklists of hazardous products, and promotion of green procurement through strengthening of guidelines and standard bidding documents. More discussions are planned for November 2000.

■ OED

Operations Evaluation Department Environmental Review Under Way

In parallel with the development of a World Bank Group environment strategy, the Bank's Operations Evaluation Department (OED) is preparing an evaluation of the Bank's performance in the promotion of environmental sustainability.

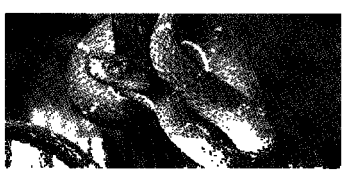
A number of thematic areas were selected by OED for in-depth evaluation based on their potential value for the formulation of the Bank's environment strategy, including:

- *Compliance, ownership, and sustainability of environmental safeguards.* The review will address systemic weaknesses associated with compliance.
- *The poverty-environment nexus.* The review will attempt to identify and evaluate the factors associated with success in this area and assess the potential for replication and scaling up.
- *Environmental impact of SALs/SECALs.* Understanding the environmental impacts of adjustment programs has improved considerably over the years, yet implementation varies across countries. The review will assess efforts to integrate environmental issues into structural adjustment loans and Country Assistance Strategies.
- *Global issues.* The OED review will focus on two issues that will be of critical importance during the next decade—desertification and biodiversity.

C. Carnemark

The Interim Report of OED's Environmental Evaluation was presented to a subcommittee of the Bank's Board in July 2000. The final report is planned to be completed in the first quarter of 2001.

■ Cloud Forest Alive



With support from the World Bank, the Tropical Science Center of Costa Rica in April 2000 began the world's first live internet site based in the tropical forests of Central America. Through the *Cloud Forest Alive* (*Bosque Nuboso Vivo*) website, internet users around the globe can interact with local forest guides and researchers in the Monteverde Cloud Forest Reserve and gain an appreciation of the important roles that tropical ecosystems play at local, regional, and global levels. For more information, please visit www.cloudforestalive.org, www.bosquenuboso.org, and www.quetzalcam.org.

A Selection of World Bank Group Environmental Publications

The following publications may be obtained by sending an email message to **eadvisor@worldbank.org**, or by phoning the **ESSD Advisory Service at (202) 522-3773**.

General

Toward an Environment Strategy for the World Bank Group — A Progress Report and Discussion Draft
Environment Department
Magda Lovei, ed., April 2000

Climate Change

Flexing the Link between Transport and Greenhouse Gas Emissions — A Path for the World Bank
Lee Schipper, Celine Marie-Lilliu, and Roger Gorham
International Energy Agency, Paris
June 2000

Come Hell or High Water — Integrating Climate Change Vulnerability and Adaptation into Bank Work
Environment Department Paper No. 72
Ian Burton and Maarten van Aalst, October 1999

Environmental Assessment

Social and Environmental Assessment to Promote Sustainabilty — An Informal View from the World Bank
Environment Department Paper No. 74
Robert G[illegible]ood, January 2000

Environmental Economics

Tourism and the Environment in the Caribbean — An Economic Framework
Latin America and the Caribbean Region Report No. 20453
In collaboration with the European Commission,
John Dixon, Kirk Hamilton, Stefano Pagiola, and Lisa Segnestam
June 2000

Deforestation and Land Use Changes Induced by the East Asia Economic Crisis
East Asia Environment and Social Development Sector Unit
Stefano Pagiola, April 2000

Cinco Años Después De Rio — Innovaciones en las Políticas Ambientales
Environment Department Paper No. 73
John Dixon, December 1999 (translation by the Ministry of Planning, San Jose, Costa Rica)

Environmental Performance Indicators — A Second Edition Note
Environment Department Paper No. 71
Lisa Segnestam, October 1999

Natural Resource Management

Good Practices in Drylands Management
Ragnar Øygard, Trond Vedeld, and Jens Aune
October 1999

Drylands, Poverty and Development — Proceedings of the June 15 and 16, 1999 World Bank Round Table
Enos E. Esikuri, ed., November 1999

Pollution Management

Decision Support System for Integrated Pollution Control — Software for Education and Analysis in Pollution Management
Iona Sebastian, Kseniya Lvovsky, Henk de Koning
December 1999

In Focus — **Pollution Management Discussion Notes**
#6 Environment Funds: The Chinese Experience
#7 Environmental Challenges of Fuel Use
#8 Comparative Risk Assessment in Developing Countries
#9 Foreign Direct Investment—Boon or Bane for the Environment
Environment Department
Magda Lovei, ed., dating from November 1999 to June 2000

Developing a Culture of Industrial Environmental Compliance — A New Approach
Environment Department Paper No. 70
Michelle L. Keene, September 1999

PUBLICATIONS

Rural Development

Rural Development, Natural Resources and the Environment — Lessons of Experience in Eastern Europe and Central Asia
L. Alexander Norsworthy, ed., March 2000

Groundwater in Rural Development — Facing the Challenges of Supply and Resource Sustainabilty
World Bank Technical Paper No. 463
Stephen Foster and others, March 2000
(ISBN 0-8213-4703-9)

Food Safety Issues in the Developing World
World Bank Technical Paper No. 469
Laurian Unnevehr and Nancy Hirschhorn, May 2000
(ISBN 0-8213-4770-5)

Social Development

New Paths to Social Development: Community and Global Networks in Action
A contribution of the World Bank to the United Nations Special Session of the General Assembly, June 2000

Principles and Good Practice in Social Policy: Issues and Areas for Public Action
Prepared for the World Bank/IMF Development Committee, April 1999 (available in English, French and Spanish)

Consultations with Civil Society Organizations — General Guidelines for World Bank Staff
NGO and Civil Society Unit, 2000

Violent Conflict and the Transformation of Social Capital — Lessons from Cambodia, Rwanda, Guatemala, and Somalia,
Nat J. Colletta and Michelle L. Cullen, Conflict Prevention and Post-Conflict Reconstruction
May 2000

Culture and Sustainable Development — A Framework for Action
Social Development Department, 1999

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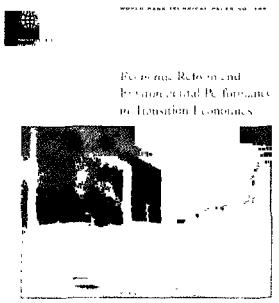
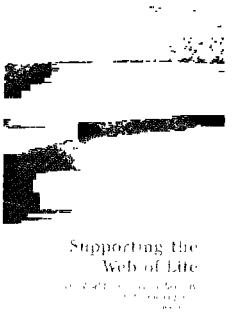
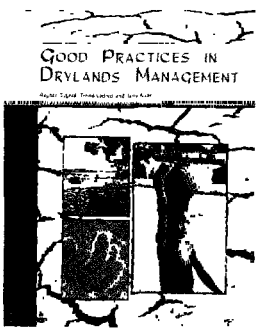
by Gordon Hughes and Magda Lovei, September 1999. World Bank Technical Paper No. 446. 61 pages. (ISBN 0-8213-4564-8) $20.00.



Supporting the Web of Life: The World Bank and Biodiversity— A Portfolio Update (1988-1999)
by Gonzalo Castro, Nola Chow, Kathy MacKinnon, Nabiha Megateli, Gunars Platais, and Tony Whitten, April 2000. 33 pages.



The World Bank & The Global Environment
by a team from the Environment Department, led by Lars Vidaeus with Gonzalo Castro, staff from Regional operating units, the Development Economics Research Group, WBI, and IFC, May 2000. 60 pages.



Good Practices in Drylands Management
by Ragnar Øygard, Trond Vedeld, and Jens Aune, October 1999. 116 pages.

Case Study: Ningbo, China, Cultural Heritage Conservation in Urban Upgrading
by Katrinka Ebbe and Donald Hankey, May 1999. 50 pages.

Integrated Coastal Zone Management of Coral Reefs — Decision Support Modeling
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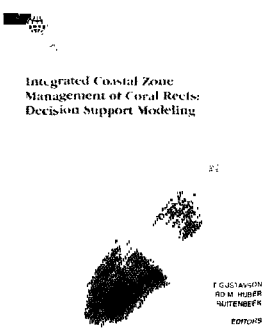

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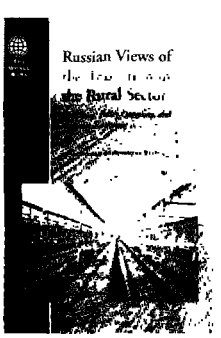

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