

IDA AT WORK

Environment: Protecting National and Global Resources

Over the past decade, the International Development Association (IDA), the World Bank's fund for the world's poorest countries, has lent some US\$4.7 billion to support investment in environment and natural resource management. This support has helped mitigate air pollution in urban and industrial areas; provide cleaner and more reliable supplies of water; make land management more sustainable; build environmental institutions; deal with climate change, and protect biodiversity. Independent evaluations have shown that IDA lending has been delivered effectively.

Through credits and analytical work, IDA has contributed to the increasing integration of environmental issues in national development strategies, and in the country assistance strategies the World Bank develops with client countries. Environmental safeguards around World Bank projects have evolved and emerged as the global gold standard for environmental assessment and management. The Bank also works closely with environmental nongovernmental organizations (NGOs) through partnerships and implementation agreements.

At a glance

- The coastal management and mangrove restoration of Vietnam's southern coast increased climate resilience for 120,000 households in lower Mekong Delta.
- Soil and water conservation works completed on over 200,000 ha in Karnataka State, India, improved average crop yields by about 24 percent and broadened crop diversity.
- Nearly 50 percent of Bosnia and Herzegovina's solid waste is now disposed of in a sanitary landfill or in another environmentally sound manner.
- IDA lending for environment and natural resources management averaged about US\$470 million per year over the past 10 years.
- Africa was the most targeted region over the same period, with a share of more than 41 percent of total IDA commitments for environment and natural resources management, followed by South Asia with 26 percent.

IDA CONTRIBUTIONS

IDA is helping countries meet their Millennium Development Goals.

While environmental sustainability is a factor in meeting the Millennium Development Goals overall, Goal 7 specifically is to *ensure environmental sustainability*. Two targets under this goal are a particular focus of IDA's environmental work: targets 9 and 10.

Incorporating the principles of sustainable development

Target 9 is to integrate the principles of sustainable development in country policies and programs, and reverse the loss of environmental resources. The first part of this target coincides with the Bank's ambition to incorporate environmental issues, as stated in its environment strategy.

The World Bank provides two kinds of financial support: Development Policy lending, which support economic and social programs across a broad range of sectors; and Investment lending, which support specific poverty reduction projects. Development policy lending has benefitted from a greater integration of environmental issues, often focusing specifically on strengthening governance in natural resource management. The percentage of Development Policy Loans addressing environment and natural resource management has grown from about one percent in fiscal year 2000 to 16 percent in the fiscal year 2008.

An example is Central African Republic's Development Policy Operations, where improved governance and transparency of forestry and mining assets set the stage for restoring the key functions of state gover-

nance, especially with respect to natural resource management. These efforts were supported by parallel activities by other World Bank teams, such as the debt relief initiative, and by other bilateral and multi-lateral institutions.

Protecting environmental resources

The second part of MDG target 9 refers to several environmental resources, one of them being forests.

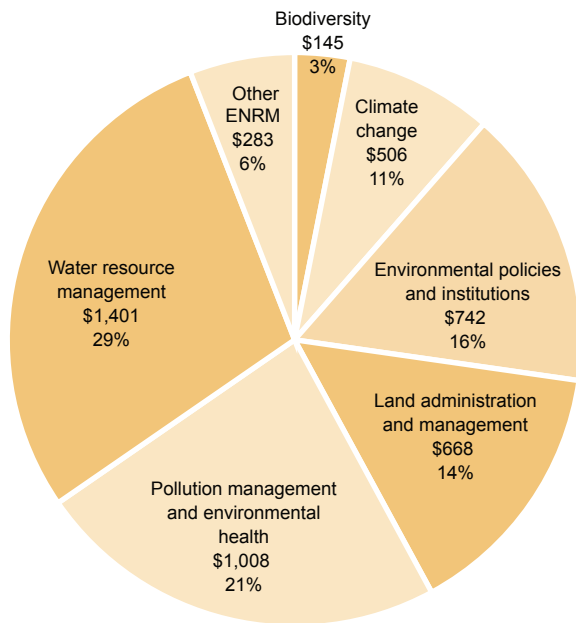
Since 1990, the world has lost some 1.3 million square kilometers of forest, almost 100,000 square kilometers each year. Considering that more than 1 billion poor people derive their livelihoods from forests, this rapid loss threatens their prosperity and national efforts to reduce poverty.

In forest management, IDA combines work to make the management of protected land areas more effective with activities that benefit forest-dependent communities. IDA has financed the creation of new protected areas as well as the expansion and strengthening of existing ones. These cover forest, mountain, and dry land systems, with increasing attention paid to freshwater and marine ecosystems.

Examples include Lao, Uganda, Bolivia, Madagascar and India (see box).

The international community has turned to the World Bank for leadership in the areas of energy access, as well as the mitigation of greenhouse gas emissions and adaptation to impacts of climate change. The Bank began articulating its response in an April 2006 paper entitled *Clean Energy and Development: Towards an Investment Framework*. Intensive work along those lines continued at

IDA Commitments for Environment and Natural Resources Management (ENRM) by Sub-theme, FY2000–2009 (US\$ million)



the Bank, with the IDA and Climate Change report (2007) and a Strategic Framework on Climate Change and Development (2008).

For the poorest countries of the planet, the issues of improved energy access and clean energy are paramount, and IDA will support them by providing analytical work, capacity building, and lending to reduce vulnerability to climate variability and change.

Providing access to life-saving resources: water

While the safe drinking water Millennium Development Goal target is largely on track globally, not even half of the sanitation target will be met by 2015. Current financial efforts need to be almost doubled to meet the sanitation target. Reaching goals on water supply and sanitation alone in sub-Saharan Africa will

require annual investments of some \$7 billion annually, well above current investments of \$800 million annually. Water, environment, and health teams continue to work together on issues of child mortality, water quality, hand-washing, and other key activities.

Using IDA's comparative advantage

Environmental issues cut across economic and social sectors and require strong government leadership to correct market failures and promote actions by all members of society. While many development partners are active in this sector, IDA provides unique services by using its partnerships with governments at all levels to integrate environment into economy-wide policy and development planning. This includes:

- linking the environment and all relevant development sectors (e.g., through analytical work and sector-wide environmental assessments);
- convening stakeholders within and outside the national context to form partnerships that address environmental problems requiring collective action;
- allocating significant financial resources as demonstrated by a lending volume of about US\$4.7 billion in environmental and natural resources projects in the past decade;
- mobilizing additional financial resources and coordinating assistance on environment with the Global Environment Facility (GEF), bilateral agencies, and foundations;
- making available the largest contingent of experts in the world—more than 200 staff—with an increasing presence in field offices;
- developing global knowledge on a broad range of topics that help clients learn from each other on means to achieve economic growth with environmental sustainability.

Planting Trees in Southern Vietnam to Fight Coastal Erosion

When Typhoon Linda struck southern Vietnam's coast in 1997, it exposed a compromised ecosystem. Historically, vast mangrove forests have stabilized coastlines, affording protection from winds and storms. But for years, local populations had exploited the forests for timber and firewood or cleared the trees to make room for shrimp farms.

With a view to rebuilding livelihoods and restoring a devastated ecosystem, the Coastal Wetlands Protection and Development project (IDA \$23M, Global Environment Facility \$7M) financed by the World Bank set about planting almost 5,000 hectares of mangroves, often in challenging environments.

Including related government programs, about 25,000 hectares of new trees were planted between 2000 and 2007 to protect Vietnam's southern coast.

Today, the newly planted trees are a haven for sea creatures. Sediment from the Mekong Delta is being trapped in the mangroves' unique root systems, helping roll back years of coastal erosion. As a result, fishermen are witnessing more shell varieties, a resurgence of crab seedlings, improved daily catches and higher incomes. And coastal communities have gained protection from waves and seasonal storms.

The project also included an ambitious social development program to help address one of the root causes of environmental degradation—precarious living conditions and entrenched poverty in areas near the coast. All together, about 1,500 families across four provinces were relocated from a fragile beach-front environment to comfortable housing in new communities protected by dikes. These families gained access to schools, roads, electricity, water as well as literacy classes, extension services, micro-credit, seeds and land. For many, the move has meant new opportunities and a more secure grip on life.

Helping to deliver results for people around the world

In the *India Karnataka Watershed Development Project* (IDA US\$100 million), completed in 2007, IDA played a key role in helping the government design a project to test new participatory approaches for integrated watershed planning and implementation. The new model also draws in non-governmental organizations (NGOs) as active partners. Results include **soil and water conservation works completed on over 200,000 ha, improving average crop yields by about 24 percent and broadening crop diversity.**

The *Nigeria Local Empowerment and Environmental Management Project* (IDA US\$70 million) demonstrated how Nigerians can plan, fund, implement, and operate and maintain small environmentally-sustainable and socially-inclusive projects across a number of key sectors. More than one million people are benefiting from education micro projects, 1.1 million from health, 1.8 million from water, 500 million from rural transport, and 500 million from environment and natural resource management facilities provided by the communities themselves. The project monitoring records also show 1.2 million more children are now in school as a result of the education facilities under the project and close to 1.9

million people now have access to improved water supply in terms of distance traveled and cost.

Relying on a Strategic Environment Assessment and a National Tourism Strategy, The *Honduras Coastal Tourism Project* (IDA \$5 million) set out to plan a more sustainable coastal tourism industry. It set up a series of environmental conservation activities, as well as a Fondo Prosperidad for income-generating activities, and to underwrite financial sustainability of the sector. The region now has a “sustainable tourism” approach that integrates the economic benefits of responsible tourism. This includes low-impact energy generation, climate resilience planning, and natural resource conservation.

The *Bosnia and Herzegovina Solid Waste Projects 1 & 2* (IDA US\$66 million total) target people’s exposure to garbage in open dumps, which is one of the most serious public health risks in urban areas. The project focuses on regional landfills, safe methods of disposal, and rehabilitation of landfills. It also emphasizes, public awareness, training of sector staff, extending waste collection to areas not currently serviced, and the development of business plans. **With six regional landfills established by the end of the first project in 2009, almost half of the country’s population is benefiting.** A new project is being prepared to support the construction of six new sanitary landfills by the end of 2013. Expected impacts of this second project include an improved disposal management system and enhanced coverage of formal waste management services, improved ground water quality at disposal sites, higher citizen satisfaction with waste management services, and an increased cost recovery rate of participating utilities.

Providing critical research and analysis

In addition to lending, IDA has provided an average of 18 analytical studies a year over the past three years, as well as a range of technical assistance focused exclusively on the environment.

We continue to work with our partners and focus on the messages contained in groundbreaking 2008 World Bank study *Environmental Health and Child Survival—Epidemiology, Economics, Experiences*. This report highlighted that diseases from environmental risk factors—diarrhea, acute respiratory infections, and malaria—are the top killers of children under five in developing countries. Malnutrition is an important contributor to child mortality and is inextricably linked to environmental infections. Climate change is projected to increase the burden of malnutrition, malaria, and diarrheal diseases. The burden falls most heavily on the poor, particularly in large, populous areas in South Asia and Africa.

Given the strong linkages of environmental factors to health outcomes, such as diarrhea and malnutrition, and the effects of climate change on food security, collaborative research for health offers a significant opportunity to incorporate those linkages. On the Bank’s side, it also underscores the need for multiple sectors in the Bank to work together toward achieving improved health outcomes in client countries, both through prevention of disease and death, as well as through treatment and innovation related to drug and vaccine development, for example.

Furthermore, it has direct implications for institutional arrangements in the Bank to facilitate the requisite collaboration across

sectors for, and continued attention to, tackling diseases such as diarrhea, which still claims 1.6 million lives annually, mostly of children from poor families in developing countries.

Further, recently completed Economic and Sector work in Uganda (2009) shows how financing and governance issues are critical to expanding sanitation and hygiene, improving environmental health outcomes and meeting the country's various health goals. The Uganda analysis identifies institutional bottlenecks relating to sanitation and hygiene and shows how an integrated budget line for sanitation can be included in the context of Uganda's efforts to decentralize some essential services, bringing them closer to the communities.

Country environmental analyses provide the analytical basis to integrate environmental considerations into the range of projects and programs—both lending and technical—the Bank offers to support developing countries. In fiscal year 2008, country environmental analyses were completed in several IDA countries, namely Ethiopia, Honduras, Namibia, Nepal, Nigeria, Senegal, Timor-Leste, and Vietnam. Analyses also were underway in Benin, and Côte d'Ivoire.

Similarly, Strategic Environmental Assessment provides a framework for assessing and managing a broad range of environmental risks, further assisting the Bank as it integrates environmental issues across numerous sectors into its activities. The assessment has focused on fisheries, forestry, mining, and urban development planning sectors. Work was completed during the 2008 fiscal year in IDA countries Bangladesh, Cambodia, Cameroon, Guinea, India, Kenya, Liberia, Madagascar, Sierra Leone and Zambia.

The Second Natural Resources and Environmental Governance Development Policy Operation Program for Ghana, followed a country environment analysis prepared in collaboration with a local donor group on environment and natural resources. In addition to supporting a Strategic Environmental Assessment for the oil sector, this program continues to address governance issues in the forestry and mining sectors as well as to improve environmental management.

GLOBAL ISSUES

The world today faces an array of both persisting and new challenges in seeking to protect the environment, manage or mitigate the impacts of climate change, and protect the earth's biodiversity. Achieving progress in all these areas—such as properly managing forests, preserving fish species or preventing soil erosion—requires actions coordinated across sectors and among the various stakeholders.

IDA has a proven track record of effective engagement in global environmental issues.

The international community has turned to the World Bank for leadership in a number of areas, including climate change, biodiversity, sustainable forest protection and forests and management, and coastal and marine management, including fisheries.

Climate change

Important milestones have been reached in the effort to broaden action on climate change over the past couple of years. The Strategic Framework on Development and Climate Change was adopted by the World Bank in October 2008. During fiscal year

2009, donor country pledges have been made to Climate Investment Funds and project implementation is expected to begin as early as the current fiscal year. Meanwhile, the World Bank's Climate Change Portal provides climate-related data and serves as a launching point for adaptation tools (including the Climate Risk Screening Tool ADAPT) and other resources. These achievements are contributing to IDA's efforts to combine development and climate change action in an integrated country platform. As a result, IDA's recent lending and non-lending activities have been characterized by increased attention to climate-related risks and improved analytical work.

More information on IDA's climate change activities can be found in a brief on the subject at www.worldbank.org/ida.

Biodiversity

The World Bank has been a leader in strengthening the capacity of developing countries to benefit from biodiversity funding.

IDA's biodiversity investments help to improve the management of protected areas, build the capacity of communities to manage biodiversity resources, and work with governments to design and implement policies that support effective management on local, national, and regional levels. One such project, the Guinea-Bissau Coastal and Biodiversity Management Project has provided the investment to establish IBAP, a semi-autonomous Government agency responsible for management of the country's five national parks. The agency works with the communities to ensure that the forests are protected. Protection of this vast forest-rich area opens an opportunity for the generation of carbon credits in the

international carbon market as a result of reduced emissions from deforestation and degradation. The resulting funds will help the country to position itself to fund IBAP and the management of the parks, rather than through financing from IDA and the Global Environment Facility.

Sustainable land management

The recent Millennium Ecosystem Assessment, with contributions from more than 1,300 authors from 95 countries, confirmed that land degradation and desertification is potentially the most threatening ecosystem change with impacts on the livelihoods of the poor. One of the leading financiers of measures to combat land degradation and desertification, IDA has invested some \$700 million in sustainable land management activities, including the TerrAfrica partnership in sub-Saharan Africa. One such example is the Sustainable Land Management Project in Ethiopia, where smallholder farmers are working to reduce agricultural land and to improve agricultural productivity through improved watershed management practices, rural land certification and administration, and access to financial and technical assistance.

Forest protection and management

Forest protection and management is another long-standing area of IDA engagement. *PROFOR* is a multi-donor partnership to provide improved information and knowledge on key forest issues such as livelihoods, governance, finance, and cooperation across sectors. Through the *Forest Alliance*, IDA combines forces with the World Wildlife Fund to create representative, well-managed protected forest areas, and responsibly-managed forests outside protected areas. IDA is also involved in

the *Forest Law Environment and Governance* process. In partnership with governments, civil society, and the private sector, this process aims to create high-level political commitment to address illegal logging and other forest crime. Additionally, The Forest Carbon Partnership Facility supports climate change mitigation that reduces deforestation.

Coastal and marine management

Climate change threatens to push many of coastal and marine ecosystems over the edge, with severe consequences for all of society, and especially harsh consequences for the world's poor.

Properly valuing coastal and marine ecosystem services is critical to sustainable development, according to the World Bank publication *Environment Matters: Valuing Coastal and Marine Ecosystem Services*. This report argues that while we recognize the ocean provides vast quantities of food, it also plays a key role in regulating our global climate through its role in the earth's carbon cycle, and the global conveyor belt of ocean currents. The ocean is also home to the richest diversity of life forms on the planet. These and other essential services vital for life support and humankind have been treated as "free goods", and the ecosystems that provide them are rapidly deteriorating through overuse, pollution, and physical destruction.

Valuation of indirect ecosystem services pays particular attention to the regulating role of coastal and marine resources in providing habitats for marine ecosystems and in continuing to provide essential services in fisheries productivity, tourism amenities, coastal protection, and CO₂ uptake.

The annual contribution of ocean ecosystem goods and services to the global economy has been estimated to exceed \$20 trillion. Non-market values such as biodiversity and climate regulation are incalculable, and the spiritual worth of an intact seascape and the wonder of a coral reef are impossible to quantify.

Coastal and marine ecosystems play a complex and vital role in supporting economic prosperity and social welfare in developing countries. As we progress further into the 21st century, the importance of these coastal and marine resources is certain to increase.

Fisheries

The World Bank's **Global Program on Sustainable Fisheries**, "PROFISH" continues to meet the challenges of the growing crisis in the world's marine fisheries and the impacts of the crisis on poor people in coastal- and fisheries communities around the world. Recently, PROFISH produced two major publications geared at policy makers and managers in IDA countries: The first is the "Sunken Billions", which focuses on economic justifications for fisheries reform; the second is "Changing the Face of the Waters", which looks into the promises and challenges of sustainable aquaculture. Both reports are already being applied in the West Africa Regional Fisheries Project, which aims to ensure sustainable livelihoods, food security, and economic growth for nine IDA countries, from Mauritania to Ghana.

LOOKING AHEAD

The Bank, the International Finance Corporation and the Multilateral Investment Guarantee Agency are embarking on the preparation of a new World Bank Group Environment Strategy,

expected to be completed by December 2010. This exercise reflects the World Bank Group's enduring commitment to ensure that its support to client countries leads to development results that are economically, socially, and environmentally sustainable.

The new strategy will articulate a set of principles and propose an approach for achieving environmental sustainability within the World Bank Group's portfolio. It will examine the experience and lessons learned from the creation within the World Bank of the Sustainable Development Network in facilitating the integration of environmental considerations in other sectors in which the World Bank works.

Through the strategy preparation process, the World Bank will seek to identify key areas in which it should engage to support its clients to more effectively address environmental priorities and move toward greater sustainability. In addition, the strategy will explore the Bank's potential role in supporting innovative financing approaches for supporting environmentally sustainable development in client countries. In that regard, the Bank will work closely with development partners, such as the Global Environment Facility and multilateral and bilateral donors, with a view to strengthening collaboration.

Lessons learned.

In its work on environmental issues, IDA is increasingly reflecting the following lessons learned:

- Investing in the environment is economically justified. IDA investments have demonstrated that improving management of crops, grasslands, and forests can provide higher incomes to poor people. Cleaner air, water, and reduced exposure to human waste and garbage improve the health and productivity of the working poor.
- Early and comprehensive analytical work helps target IDA support addressing economic and social problems of critical importance to the poor (e.g., investing in watershed management for food production and water supply). Country-level environmental analyses present an opportunity to work with governments to identify the main environmental challenges and to collaborate with other donors, who generally have similar interests.
- Operational quality at entry, supervision and completion can still be further enhanced.
- Increasingly, IDA should rely on domestic environmental safeguards that pass the test of equivalence and acceptability to IDA.
- The environment is an area with a multitude of actors. To ensure strategic objectives are met, it is important that IDA continues leveraging its resources through global programs.

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<http://www.worldbank.org/ida>