

**CONSERVING
THE
EARTH'S
RESOURCES**



UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

Earth

— The word conjures images of fruitfulness and plenty. But Earth is not endowed with an infinite capacity to replenish itself. People need to use the bounty of nature to prosper while ensuring that nature's resources are conserved for future generations.

This is the key to sustainable development — making sure that today's growth is not achieved at tomorrow's expense.

America's foreign assistance program, which helps bring the benefits of economic and social development to people in more than 90 countries worldwide, emphasizes the need to manage wisely the Earth's natural resources.

Environmental degradation is a mounting problem that must be addressed internationally. Destruction of tropical forests in Brazil and air and water pollution in Poland, for example, ultimately affect all nations, including the United States.

The U.S. Agency for International Development (USAID) has long been a world leader in recognizing the need to balance the requirements for economic growth with those of environmental conservation. The Agency has increased its total funding for environmental efforts by more than \$150 million over the last five years. Its current annual funding level for these efforts exceeds \$400 million, plus additional amounts for energy conservation and sustainable agriculture. USAID also funds population assistance and other poverty alleviation programs to help reduce pressures that lead to environmental degradation.

The Agency's environmental strategy for the 1990s focuses on the following constraints to development worldwide:

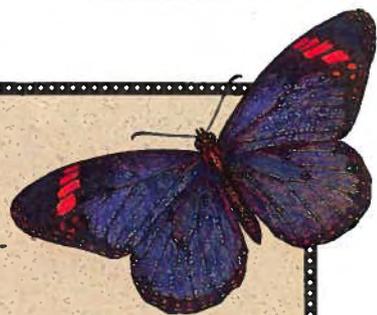
- ◆ loss or degradation of tropical forests and other critical habitats for biological diversity;
- ◆ urban and industrial pollution;
- ◆ degradation and depletion of water and coastal resources;

- ◆ environmentally unsound energy production and use; and,
- ◆ unsustainable agricultural practices.

USAID emphasizes three approaches to dealing with these problems. First, the Agency encourages and supports efforts to adopt policies that are both economically and environmentally sound in the countries it assists. Second, USAID helps strengthen the capacity of institutions that work on environmental matters by providing training and technical assistance and by encouraging grassroots efforts to protect the environment. Third, USAID helps countries determine an appropriate role for both the private and public sectors in protecting the environment, particularly encouraging innovative private sector responses and the democratic process.

A key effort to engage the private sector is a new United States-Asia Environmental Partnership (US-AEP) announced by President Bush in January 1992. Initiated by USAID, the partnership brings together more than 20 U.S. government agencies and many businesses and non-governmental organizations to work with their Asian and Pacific counterparts to build professional skills, transfer environmental technology and expertise, support new environmental and energy infrastructure and build a regional biodiversity network. The US-AEP is a long-term U.S. government effort to help the rapidly industrializing countries of Asia and the Pacific respond to problems of severe industrial and urban pollution and widespread destruction of tropical forests and marine and coastal resources.

Given the magnitude of the environmental and developmental problems facing countries the United States assists, cooperation and collaboration in tackling such problems are essential. Therefore, USAID works closely with host countries, non-governmental organizations, private sector groups, other U.S. government agencies, international organizations and other donor countries.



TROPICAL FORESTS AND BIOLOGICAL DIVERSITY

Tropical forests, which contain more than half of the world's animals and plants, are crucial for sustaining human life and livelihood. Deforestation and the corresponding loss of biological diversity threaten the future of all nations, both developed and developing alike. Deforestation, for example, is closely linked to global climate change.

Yet, as population and economic pressures grow, tropical forests are vanishing at an alarming rate. More than 17 million hectares (42 million acres) of tropical forests are lost each year alone. The result is massive extinction of species, now occurring at the fastest rate known in history.

Up to one-quarter of the world's species may disappear in the next three decades. This includes many plants whose properties have not yet been researched but that could be important sources of new medicines or genetic material needed to improve agricultural productivity. Most of these species will never even be recorded by science.

USAID currently provides more than \$60 million a year for biological diversity conservation—more than any other U.S. government agency. The importance of biological diversity to economic development is reflected in the more than fivefold increase in USAID funding over the last five years.

USAID recognizes that developing countries need to derive benefits from tropical forests to justify maintaining them. Therefore, USAID programs in natural forest management, buffer zone management and forestry policy reform are aimed at stopping deforestation and protecting biodiversity while developing the economic potential of natural

Parks in Peril

The Parks in Peril Project, which began in September 1990 through a cooperative agreement with The Nature Conservancy, will transform "paper parks," i.e., parks in name only, in the Latin America and Caribbean region into fully protected areas. The USAID project stresses community involvement in the management and operation of the parks to ensure both long-term viability of the parks and to increase the local residents' share in the economic benefits of the conservation efforts.

USAID provided more than \$5 million for the project, with another \$2 million in matching funds contributed by The Nature Conservancy. The initial phase emphasized strengthening the ability of local conservationists to manage almost 2.8 million hectares (7 million acres) in 10 parks. The project will now expand with additional USAID and private funds to include 20 additional parks.

areas and their buffer zones for both timber and non-timber forest products. Other Agency activities focus on environmental education; efforts to strengthen legislation, policies and institutions relevant to conservation of biodiversity and tropical forests; and habitat management to protect individual endangered species, such as the elephant, mountain gorilla and rhinoceros.

USAID has been an early and active supporter of innovative conservation mechanisms such as debt-for-nature swaps. These swaps provide funds for the development and protection of parks and other natural areas that are critical for the conservation of endangered species.



World Wildlife Fund / C. Freese

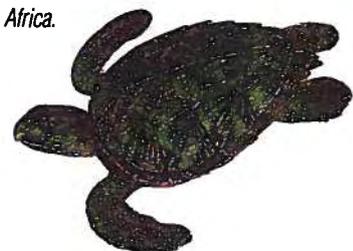


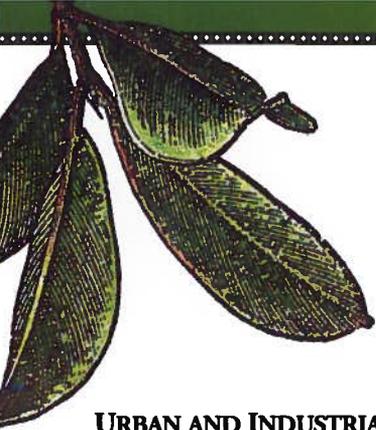
World Wildlife Fund / R. Weyerhaeuser

Protecting Africa's Elephants

USAID has provided more than \$10 million for the protection of the African elephant. The Agency supports both regional activities as well as specific national projects in Tanzania, Cameroon, Niger, Zimbabwe, Botswana, Zambia and Kenya.

For example, African elephant conservation is an important part of a USAID project that helps train the staff of the Tanzania Wildlife Department in techniques to develop land-use management plans for the country's protected areas. The Agency sponsors efforts by the National Zoological Garden of the Smithsonian Institution to bring wildlife conservation and management training courses to Tanzanian wildlife professionals in the Mikumi National Park — home to one of the largest elephant populations in Africa.





URBAN AND INDUSTRIAL POLLUTION

More than 60 percent of the world's population is expected to live in cities by the year 2025. Urban growth rates now exceed rural growth rates in most regions of the world, reflecting the migration of people to urban areas in search of employment and a better life.

Cities in the developing world are ill-equipped to manage the rapid growth they are experiencing. Many already have serious environmental problems. These include air pollution from vehicles and industries, contamination of water supplies and dumping of untreated sewage. Such widespread environmental degradation threatens human health and productivity and prospects for economic growth.

Improving the capability of local governments to manage urban environmental problems is an important part of USAID's program. The Agency provides training and technical assistance to local government officials to enhance their ability to administer effective environmental programs.



World Wildlife Fund / R. Liroff

In selected urban areas where industrial accidents could have serious environmental effects, USAID is promoting the design of disaster preparedness programs. Representatives of government, the community and the private sector are cooperating in developing environmental disaster response plans.

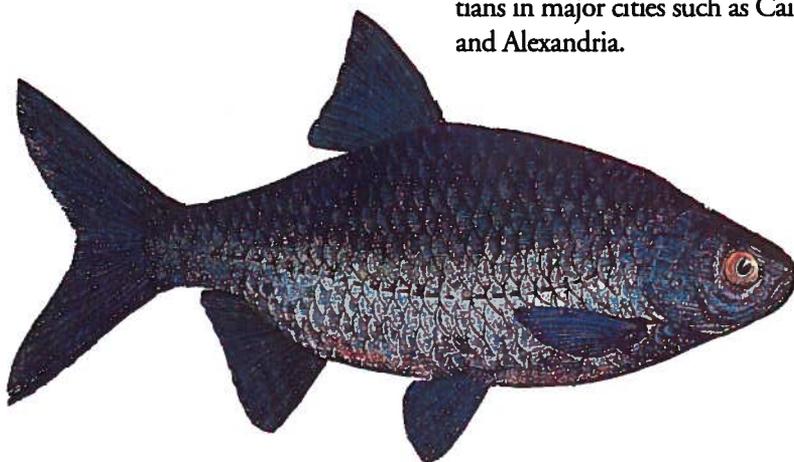
In addition, the Agency works with U.S. private industry to provide technical assistance and training in industrial pollution control and occupational health and safety. Improving solid, toxic and hazardous waste management and improving water and wastewater treatment are two areas of particular attention. In Egypt, for example, USAID is currently carrying out \$2 billion in water and wastewater projects, serving 22 million Egyptians in major cities such as Cairo and Alexandria.

Eastern Europe: Addressing Urban Pollution

In Central and Eastern Europe, USAID has mounted a multimillion-dollar, multiyear program designed to redress the serious economic, health and ecological damage caused by unchecked urban and industrial pollution.

The USAID-supported Regional Environmental Center in Budapest, Hungary, plays an integral role in raising public awareness about urban environmental issues and improving the institutional capacity of non-governmental organizations throughout the region. The center has developed environmental education materials for use throughout the Central and Eastern European educational system.

In Czechoslovakia, USAID is providing assistance to local governments to solve environmental problems, while in Poland USAID promotes private investment in energy industries and increased efficiency of energy production and use. An air quality monitoring network is being developed for the historic city of Krakow that will provide information for emergency and long-term emission control strategies.



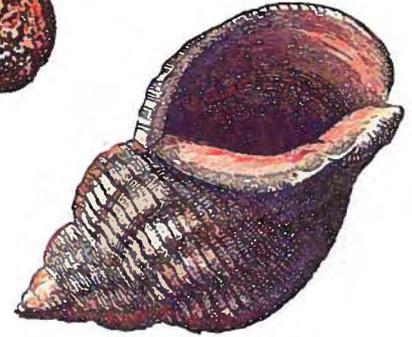
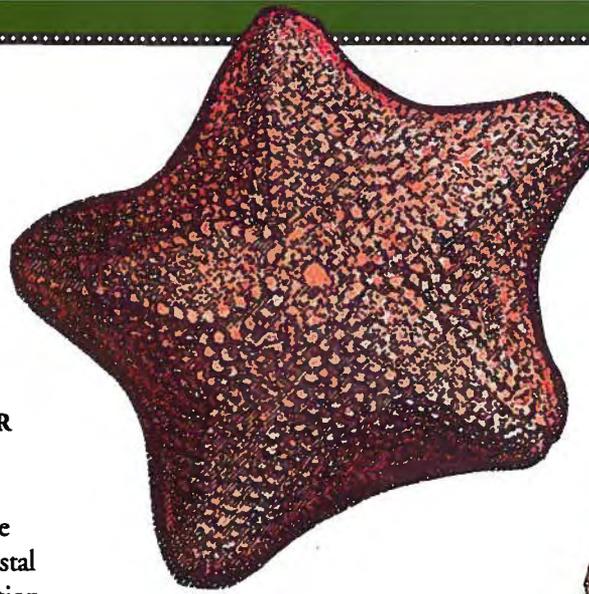
COASTAL ZONES AND WATER RESOURCES

More than 85 percent of the world's people live in coastal areas, where the greatest population growth is projected to occur over the next 20 years.

Coastal zones are vital centers of tourism and transportation, as well as industry, fishing and agriculture. In fact, economic development in many countries depends largely on how coastal areas are used. Unfortunately, in many countries, these fragile, biologically productive areas have been severely degraded.

USAID helps strengthen the ability of developing countries to carry out integrated coastal resource management programs. These programs address the environmental, social, cultural and institutional factors necessary for conserving and using coastal resources for economic development.

USAID also is actively involved in the conservation of wetlands. In the Philippines, for example, where 70 percent to 90 percent of coastal wetlands have been destroyed or severely degraded, USAID is helping to analyze some 136 wetland areas to develop conservation and management plans.



Integrated Coastal Zone Management: Bringing About Policy Change

USAID's work in coastal resources management has become a successful model for integrated coastal zone management. Pilot programs are under way in Thailand, Sri Lanka and Ecuador. The USAID project led to the adoption of a national coastal resources management program in Ecuador; to the adoption of an action plan to preserve the beauty and productivity of the coral reefs and beaches in Phuket, Thailand; and to the ratification of a coastal zone management plan by the Sri Lankan Cabinet.



ENVIRONMENTAL IMPACTS OF ENERGY PRODUCTION AND USE

The rapidly growing demand for power to sustain economic growth has caught developing countries with insufficient capital to meet their energy needs in an environmentally sound manner.

Because older facilities often are inefficient and generally lack pollution control devices, many current energy development programs contribute to environmental degradation. Energy production and use also are the most significant contributors to emissions of greenhouse gases that may affect the potential for climate change.

USAID, working with developing country power supply agencies, takes a comprehensive approach to the problem. In cooperation with organizations such as the World Bank and the Asian Development Bank, the private sector and other donors, USAID supports efforts to increase energy efficiency, expand energy supplies and enhance the role of private power generation. USAID seeks out innovative approaches, such as improving power sector investment planning and encouraging the application of cleaner technologies, both those that use renewable energy resources and those using conventional fossil fuels.

USAID promotes cost-effective technologies that use renewable energy resources such as geothermal, solar and wind resources. The Agency also works with the private sector to help improve the efficiency of energy use. Major national energy conservation programs now are under way with USAID assistance in Egypt, the Philippines and Morocco.



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Putting Waste to Good Use: Electricity from Sugar Cane

USAID supports the use of biomass residues in the production of electricity and liquid fuels in developing countries. The Agency seeks ways to support the generation of commercially competitive electricity from the residues of common agricultural crops, such as sugar cane and rice husk residues as well as woodwastes of forest product industries. In Costa Rica, Guatemala and Thailand, with USAID support, private sugar companies now sell excess electrical power generated from sugar cane residues to the national power utilities.





SUSTAINABLE AGRICULTURE

Proper agricultural practices can significantly enhance economic growth prospects. USAID has taken steps to incorporate natural resource and environmental concerns into a wide range of its agriculture programs, including efforts to establish sustainable farming systems that can respond to changing economic and climatic conditions.

One important component of USAID's focus on sustainable agriculture is integrated pest management. Integrated pest management programs encourage the breeding of pest-resistant plant species and re-



USAID/ C. Watson

place the traditional application of pesticides with an environmentally safer mix of natural pesticides, biological controls and crop rotation practices combined with minimal use of pesticides.

To support these efforts, USAID also has been working toward the safe removal and disposal of surplus pesticide stocks in a number of countries. Effective examples include in-country incineration of pesticide stocks and removal of old stocks for incineration abroad.

Another important element of USAID's work in sustainable agriculture is support for developing agroforestry systems that contribute to conserving soil, water and forests while providing useful timber and non-timber products for on-farm consumption as well as for markets.



World Wildlife Fund



USAID

LOOKING TOWARD THE FUTURE

The environmental problems facing developing countries are enormous. Those problems have neither quick nor easy solutions. However, they must be confronted because economic growth in most of these countries is based largely on the use of natural resources—water, soil, forests—that are under severe pressure and are rapidly being depleted or polluted. The international community as a whole now recognizes that development that ignores environmental consequences cannot be sustained over the long term.

Most of the corrective actions must be carried out by the developing countries themselves, using their own human and financial resources. However, donors can assist in finding solutions and supporting appropriate policy changes.

USAID has been in the forefront of that process for years, pioneering innovative approaches that address both environmental concerns and development objectives. With USAID staff serving in more than 80 countries and having a thorough understanding of local conditions and concerns, the Agency is well placed to carry out the task. Because of that advantage, a number of successful USAID projects have become models replicated by other organizations. The Agency is committed to continuing its environmental efforts, helping to ensure that the Earth's bounty will be conserved for generations to come.

Two Decades of Leadership in Integrated Pest Management

USAID has helped develop environmentally safer pest and pesticide management activities for more than 20 years. Recent activities continue to provide technical assistance and training in pest management in the developing world.

USAID-sponsored training programs have made a valuable contribution to agricultural development and environmental safety. More than 5,400 students from 46 developing countries have received training in areas ranging from integrated pest management to the diagnosis and treatment of pesticide poisoning. Quality control programs have been introduced in 57 laboratories in 30 countries.

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