

Biodiversity Conservation and Sustainable Use: USAID Program Overview

Preface

This publication summarizes the strategy for biodiversity conservation and sustainable use of the U.S. Agency for International Development (USAID). It provides highlights of USAID-supported projects that illustrate the range of approaches used to meet the objectives of USAID's *Strategy for Sustainable Development*.

A companion publication, *Biodiversity Conservation and Sustainable Use: USAID Project Profiles*, contains detailed descriptions of 42 of the more than 90 USAID-supported projects having a biodiversity conservation or sustainable use component that were active in 1994. In general, the projects profiled have at least 50 percent or \$500,000 of their funding devoted to biodiversity.

Janet N. Abramovitz authored the text for this report. Funding analyses and graphics were prepared by David Neufeld, ENRIC program analyst. Pamela Humbert created the report design. Overall technical editing and production as well as supplementary research, analysis, and writing was carried out by Barbara Bever, ENRIC environment program research manager.

This document was developed with guidance and reviews provided by Dan Deely, USAID project officer; Tom Hourigan, USAID policy advisor; Glenn Prickett, USAID chief environmental advisor; and the Bureau Environmental Officers.

ENRIC
Environment and Natural Resources Information Center
November 8, 1994

Contents

Preface	
Introduction	1
The USAID Strategy for the Conservation and Sustainable Use of Biodiversity	3
Highlights of the USAID Biodiversity Program	5
Setting the Context	7
Capacity Strengthening	12
Encouraging Participation	14
Sustainable Use of Biodiversity	15
Innovative Financing Mechanisms	19
Strengthening Coordination	20

Selected USAID Biodiversity Conservation and Sustainable Use Projects

Africa

Policy Analysis Research and Technical Support (PARTS)	Africa Regional
Natural Resource Management	Southern Africa Regional
Natural Resource Management	Botswana
Conservation of Northern Forests	Congo
Natural Resource Conservation and Historic Preservation	Ghana
Conservation of Biodiverse Resources Areas (COBRA)	Kenya
Sustainable Approaches to Viable Environmental Management (SAVEM)	Madagascar
Knowledge and Effective Policies for Environmental Management (KEPEM)	Madagascar
Living in a Finite Environment (LIFE)	Namibia
Action Plan for the Environment (APE)	Uganda

Asia and the Near East (ANE)

Biodiversity Conservation Networks of US-AEP	Asia Regional
Profitable Environmental Protection (PEP)	South Pacific Regional
Pacific Islands Marine Resources (PIMAR)	South Pacific Regional
Plant Genetic Resources	India
Indonesian Biodiversity Foundation	Indonesia
Natural Resource Management	Indonesia
Natural Resource Management	Philippines

Europe and the New Independent States (ENI)

Environment Policy and Technology	Regional
---	----------

Latin America and the Caribbean (LAC)

Regional Environmental and Natural Resource Management (RENARM)	Central American Regional
Environment and Coastal Resources (ENCORE)	Caribbean Regional
Parks in Peril (PiP)	LAC Regional
Environment and Global Climate Change (E/GCC)	LAC Regional
Neotropical Migratory Birds	LAC Regional
Natural Resource Management and Protection	Belize
Forest Conservation and Management (BOSCOSA)	Costa Rica
Sustainable Uses for Biological Resources (SUBIR)	Ecuador
Coastal Resources Management (CRMP)	Ecuador
Environmental Protection (PROMESA)	El Salvador
Maya Biosphere Reserve	Guatemala
Targeted Watershed Management	Haiti
Environmental Protection Fund	Honduras

Protected Area Resource Conservation (PARC) Jamaica
Development of Environmental Management Organizations (DEMO) Jamaica
Natural Resource Management Nicaragua
Natural Resource Management Panama

Global

Environment Planning and Management
Coastal Resources Management
Conservation of Biodiversity
Forest Resources Management II
U.S.-Israel Cooperative Development Research Program
Innovative Scientific Research II

Individual copies of these USAID project profiles or the complete directory, Biodiversity Conservation and Sustainable Use: USAID Project Profiles, may be obtained by contacting:

ENRIC

Datex, Inc.

2101 Wilson Boulevard, Suite 100
Arlington, VA 22201
Fax: 703-812-5010
E-mail: datex@access.digex.net

or

The Environment Center

U.S. Agency for International Development
Bureau for Global Programs, Field Support, and Research
Washington, DC 20523
Fax: 703-875-4639

Introduction

The United States Agency for International Development (USAID) is the principal source of U.S. bilateral assistance to developing countries and countries with economies in transition. USAID's goal is to provide nations, communities, and individuals with opportunities for sustainable development. Helping countries conserve their biological diversity and use it in a sustainable manner is an important part of this goal.

USAID currently supports the largest biodiversity conservation effort of any bilateral donor. The current portfolio, which supports projects in more than 40 countries, totaled \$74 million in 1994 and

will represent more than \$400 million in assistance over the life of the projects.

In addition to operating this substantial biodiversity portfolio on a bilateral basis, USAID provides a wide range of financial and technical support to other international agencies, NGOs, and scientific research centers. Through a variety of agreements, USAID also marshalls the extensive resources of other U.S. government agencies such as the Forest Service, Fish and Wildlife Service, Peace Corps, National Park Service, and Environmental Protection Agency. By these means, USAID is providing critical support for improving the management of natural resources in many countries.

USAID's biodiversity program is consistent with the objectives of the Convention on Biological Diversity. USAID has been a world leader in establishing innovative and effective conservation initiatives. The Convention's overarching objective of biological diversity conservation, the sustainable use of its components, and the fair and equitable sharing of its benefits is a fitting description of USAID's approach.

The USAID Strategy for the Conservation and Sustainable Use of Biodiversity

USAID has identified biodiversity as a top priority for action. USAID's strategy emphasizes innovative approaches for the conservation and sustainable use of the planet's biological diversity at the genetic, species, and ecosystem levels. USAID programs will maintain a special focus on two types of geographic areas: those richest in biodiversity and facing the greatest threat, and those that are the least disturbed and present the greatest opportunity for long-term conservation.

USAID recognizes that sustainable development must be based on the aspirations and experiences of ordinary people, their priorities for problems that should be addressed, and their consultations among themselves and with government and development agencies. Therefore, in biodiversity conservation as in all its programs, USAID will involve, respond to, and be accountable to the people who will live with the results of development efforts. The Agency works to build indigenous capacity, enhance participation, encourage accountability and decentralization, and to empower communities, indigenous nongovernmental organizations (NGOs), and individuals.

In all its endeavors, USAID supports sustainable and participatory development, emphasizes partnerships, and uses integrated approaches to promote sustainable development.

USAID's goals in the area of biodiversity conservation and sustainable use are to:

- @ Facilitate the setting of conservation priorities that respect the rights and needs of all peoples at the local, national, and regional levels
- @ Support the development and implementation of laws and policies that provide a framework for the conservation and sustainable use of biodiversity
- @ Strengthen national and local capacity for the management and conservation of biodiversity

- areas, including parks and protected areas
- @ Support innovative conservation efforts and research programs, including *ex-situ* approaches
- @ Develop sustainable economic uses of biological resources
- @ Encourage the involvement of NGOs and local peoples at every stage of decision making
- @ Employ innovative funding mechanisms, such as endorsements and debt-for-nature swaps
- @ Coordinate efforts with other agencies and organizations to achieve sustainable results.

USAID has embarked on a unique effort to identify geographic areas that merit special attention because of their global importance for biodiversity conservation. The *Conservation of Biological Diversity* project's **Biodiversity Support Program** is leading the effort to develop a logical and transparent framework for identifying priority areas (see page 16). This methodology will represent a significant improvement over the ad hoc decision making that has characterized much bilateral and multilateral agency biodiversity funding to date. USAID will also continue to support conservation and sustainable use of biological resources where this is a priority for sustainable development at the country level.

Measuring program impacts

USAID insists on measurable results from its programs. The Agency is developing detailed performance criteria for biodiversity conservation in consultation with experts and interested parties. USAID asks the following types of questions of the biodiversity programs it supports:

- @ Has biodiversity in key ecosystems and representative geographic areas been maintained?
- @ Have conservation plans and strategies been implemented for these areas, including protection of parks and sensitive areas and support for sustainable economic activities for inhabitants of these areas?
- @ Have these plans been developed through a participatory process? Do they enjoy local support and meet local needs, so that they can be sustained over time?
- @ Have national and regional biodiversity strategies that address relevant social and economic forces been developed and implemented?
- @ Have economic policy distortions that encourage unsustainable exploitation of natural resources been reformed?

Highlights of the USAID Biodiversity Program

USAID's biodiversity conservation program has expanded in recent years in response to increasing concerns about the environmental and human consequences of the loss of forests and other habitats worldwide. USAID funding for biodiversity conservation rose from \$5 million in fiscal year 1987 to an estimated \$74 million in fiscal year 1994; the total funding since the biodiversity program's inception in 1987 is expected to reach nearly \$500 million by the end of fiscal year 1995.

In fiscal year 1994, USAID dedicated over 40 percent of its biodiversity funding to Africa and almost 20 percent to Asia. Latin America and the Caribbean, the New Independent States (NIS), and Global Bureau programs each received 12 to 14 percent of the total.

USAID funding supports a wide range of activities, each of which plays an important role in stemming the loss of biodiversity and encouraging its sustainable use. Although most USAID activities in biodiversity conservation focus on maintaining habitats and ecosystems, funding has also been set aside for protection of certain species. For example, the U.S. Congress began in 1987 to earmark funds for African elephant conservation; over the next six years, funding for this program totaled more than \$50 million. This support was instrumental in establishing the African Elephant Coordinating Group, which has identified 49 populations of African elephants urgently requiring protection, and in preparing elephant action plans for 34 countries. In 1987, USAID initiated the first in a series of grants to help Kenya protect its severely threatened rhinoceros population.

From an initial emphasis on species, protected areas, and individual interventions, the Agency's portfolio has evolved to include projects that integrate conservation and development, address underlying issues, and support policy development. There has also been a greater emphasis on longer term project funding as well as nonproject assistance, and the use of innovative funding mechanisms such as endowments. More attention has also been placed on developing better data and indicators and evaluating and disseminating the lessons learned in past projects (see page 7).

This broader approach can be witnessed in Africa where USAID has helped support the formulation and implementation of National Environmental Action Plans and companion policy and institutional reforms. In Latin America and the Caribbean, USAID supports legislative initiatives and innovative funding mechanisms to support unique areas and organizations responsible for biodiversity conservation. The use of endowments is also shaping long-term efforts in the Asia region. Throughout all regions the Agency encourages wider citizen participation.

Most USAID assistance for biodiversity conservation and sustainable use is country driven. Projects are developed and implemented cooperatively by USAID missions in the host country in close partnership with the government, NGOs, and communities. These projects often incorporate biodiversity conservation with sustainable agriculture, environmental education, and institution strengthening. These country-based programs are complemented by centrally managed global programs, field support, and research.

Setting the Context

USAID's experience has shown that local and national governance supportive of biodiversity conservation goals is necessary for conservation efforts to reach their full potential and be sustainable. Key factors in this context include: the need for sound strategies and plans; official sanctions for NGOs and development agencies to work with local communities; improved access by women, the poor, and minority groups to environmental resources; and wider participation by all in resource planning and

management.

An important part of improving participation and addressing the needs and concerns of the entire citizenry is the inclusion of those segments who are frequently ignored in development efforts. USAID has paid particular attention to gender through the development of a comprehensive strategy and through specific project interventions (see page 10). For example, the Gender in Economic and Social Systems project provided specialists to work with NGOs to ensure consideration of gender and social concerns in *Environment and Global Climate Change* project activities in Brazil.

In setting priorities for support, USAID gives due attention to the policy, legal, and institutional aspects of governance. USAID has played a key role in supporting National Environmental Action Plans (NEAPS) in several African countries, including The Gambia, Ghana, Guinea, Madagascar, Rwanda, and Uganda, and elsewhere around the world. These plans typically include policy recommendations and concrete actions for conserving biodiversity and are developed through broad consultation. National-level planning initiatives of this kind represent a significant step toward helping developing countries fulfill their obligations under the Convention on Biological Diversity and mark a new stage in USAID cooperation with other international agencies.

USAID's largest biodiversity conservation project in Africa, *Knowledge and Effective Policies for Environmental Management*, is providing \$36 million in nonproject and project assistance to strengthen Madagascar's natural resource management capabilities. The government will use \$2 million of this assistance to establish an environmental endowment fund, to be managed by a Malagasy foundation, to support measures to protect that country's unique biological diversity. However, most of the support will serve biodiversity conservation goals indirectly by improving the policy and institutional framework for natural resource management. Key policy and institutional support activities fall into three categories: strengthening the National Office of the Environment to develop and implement environmental policy; pricing resources and generating increased revenue from natural resources; and aiding local natural resources management initiatives and community participation in resource management decisions.

The *Environmental Planning and Management* (EPM) project works to strengthen the capacity of public and private institutions to manage natural resources through a 14-year, \$36 million effort. Using state-of-the-art environmental planning methods, EPM provides technical support for the formulation and implementation of natural resource management policies and strategies. For example, EPM organized the Africa Policy Consultative Group, which advises USAID on developing the capacity of environmental institutions to plan and implement NEAPS, projects of the Global Environment Facility, and community development initiatives. EPM funds have also helped support the landmark Central American Convention on Forestry. Through EPM, USAID supported the Central American Commission on Environment and Development to promote dialogue and action on the Biodiversity Treaty for Central America.

The Indonesia *Natural Resources Management* Project is addressing the ecological, socioeconomic, and institutional dimensions of marine and coastal resource policy making, planning, and management

through the development of the Bunaken National Park in North Sulawesi. More than 20 studies leading to policy and management recommendations have been undertaken concerning the management of the park. Further studies will focus on local user rights, effectiveness of species protection, selection of protected areas, park zoning, and policy coordination.

Many projects have also provided assistance in drafting or reforming laws and policies to foster sustainable resource use. Part of the process is establishing avenues to solicit wide input into these national changes from all stakeholders, including those at the local level. The ***Environmental Protection*** project in El Salvador assisted the Executive Secretariat for the Environment in developing a national strategy for environment and natural resource management and drafting several new environmental laws. Nicaragua's new Ministry of Environment and Natural Resources also received support from USAID to form new policies and legislation. Three new environmental laws were drafted by Panama's National Institute of Renewable Resources with support from the seven-year Panama ***Natural Resources Management*** project.

The management of biodiversity in natural areas is being enhanced by improving the security of land tenure and natural resource access rights. In many cases this is accomplished through titling under existing laws, recognizing traditional or customary regimes, reforming current laws, or drafting new legislation. The Nicaragua ***Natural Resources Management*** project is helping to map and legalize Sumu and Miskito tribal land claims to ensure that they can continue their access and stewardship. The ***Forest Conservation and Management*** project in Costa Rica is helping small farmers title their land so they may reap the benefits of their investments in good land management. The ***Sustainable Uses for Biological Resources*** project in Ecuador launched a paralegal training program in land titling and tenure issues. Other projects, such as ***Policy Analysis, Research, and Technical Support and Environmental Planning and Management***, are funding further research into the relationship between resource tenure insecurity and the conservation of biodiversity.

The ***Conservation of Biological Diversity*** (CBD) project is the flagship of USAID's centrally managed support for a comprehensive biodiversity conservation program. The largest component of the project is the ***Biodiversity Support Program*** (BSP), a consortium of World Wildlife fund, The Nature Conservancy, and World Resources Institute. BSP provides technical and analytical support in developing participatory conservation projects, manages a small competitive grants program, and helps build host country capacity for conservation action.

The CBD project also supports three other components: 1) the ***Biodiversity Rapid Assessment Program***, a USAID and Global Environment Facility effort implemented by Conservation International to help countries gather critical information for conservation planning more quickly and at lower cost than traditional biological inventories; 2) the ***International Cooperative Biodiversity Groups*** program, a joint USAID, National Institutes of Health, and National Science Foundation activity that promotes responsible biodiversity prospecting and equitable sharing of benefits in cooperating nations; and 3) the ***Consultative Group on Biological Diversity***, a coordinating secretariat for private donor foundations supporting biodiversity. CBD supported a fourth component through FY 1993, the joint ***National Science Foundation/USAID Collaborative Grants Program***, which supported

biodiversity research by developing country scientists in collaboration with U.S. scientists.

Capacity Strengthening

Strengthening national capacities for natural resource management is a key element of USAID's approach to biodiversity conservation and sustainable use. USAID supports technical assistance and training to strengthen governmental and nongovernmental institutions in areas such as: policy analysis and formation, environmental laws and regulations, research, education, protected areas management, organizational and financial management, sustainable forestry, development planning, social and gender analysis, strategic planning, information management, monitoring, and evaluation.

Since 1988, the \$21 million *Coastal Resources Management Project* has been instrumental in helping three pilot countries--Ecuador, Sri Lanka, and Thailand--address the serious problems threatening their diverse and valuable coastal zones. One focus of the project has been to strengthen coastal zone policies and management agencies within central governments and build a cadre of trained national professionals. The project has also worked with local communities, empowering them to develop their own management plans after testing specific conservation techniques.

Another project that builds capacity to manage coastal and terrestrial resources is a partnership between USAID and the Organization of Eastern Caribbean States. The seven-year, \$11 million *Environmental and Coastal Resources* project seeks to enhance the ability of public, private, and community interests to collaborate in order to conserve biodiversity while promoting economic development in the region.

Assistance from USAID through the *Forest Resources Management* project will also help ensure that environmental and natural resource management is linked to sustainable development in Central and Eastern Europe and the New Independent States (NIS) of the former Soviet Union. The *Environmental Policy and Technology* project also supports a variety of activities in the NIS.

Scores of biologically significant national parks and reserves in Latin America are benefiting from management improvements supported by the *Parks in Peril* project implemented by The Nature Conservancy and its host-country NGO partners. Management actions already have been initiated in 26 priority protected areas, totalling more than 5 million hectares of biologically critical habitat spread across ten countries. The *Parks in Peril* project helps governments and private organizations develop fully functioning, financially stable, and sustainable protected areas.

Other projects, such as the *Natural Resources Management* project in Botswana, *Sustainable Approaches to Viable Environmental Management* in Madagascar, *Development of Environmental Management Organizations* in Jamaica, and the Nicaragua *Natural Resources Management* project also provide assistance to strengthen institutions that oversee protected areas.

USAID's largest genetic resource conservation activity--the \$19 million *Plant Genetic Resources* project--is helping the government of India strengthen the capacity of its National Bureau of Plant and Genetic Resources to preserve the rich genetic diversity of its country's flora. USAID is supporting a comprehensive national system to collect, preserve, evaluate, and exchange crop plant germ plasm as well as to enhance India's capacity in the conservation and use of plant genetic resources. USAID has also supported innovative efforts by other countries to conserve genetic resources of agricultural significance; for example, potato varieties in Peru and corn varieties in Mexico.

Research

Support for research, education, and scientific training is an important element in many of USAID's projects. In an effort to promote greater African participation in biodiversity research and to facilitate networking among African and U.S. professionals, the *Policy Analysis, Research, and Technical Support* project funds collaborative grants through the U.S. National Science Foundation (NSF). USAID has also teamed with NSF to fund biodiversity research through the *Conservation of Biological Diversity* project. This partnership supports collaboration between U.S. researchers and their host country counterparts. Examples of research projects funded include a Plant Inventory of the Philippines, which has expanded the capacity of the Philippines National Herbarium.

USAID also helps strengthen scientific capacity and supports collaborative research through the *Innovative Science Research II* project. For example, the New York Botanical Garden and the Herbario Nacional de Bolivia are collaborating to study the economic uses of two indigenous species of palms. The *Biodiversity Support Program* (BSP) operates a small-grants program for applied conservation research. More than 120 small grants (less than \$15,000) have been awarded for proposals submitted by developing country researchers. BSP is now disseminating the lessons learned from this innovative program.

Two important botanical and agricultural research institutions in Russia will be assisted by more than \$1 million from USAID through the *Environmental Policy and Technology* project. The Komarov Botanical Institute and the All Russia Vavilov Institute of Plant Industry (also known as the Vavilov Gene Bank) are receiving support to improve handling and storage conditions for these globally valuable plant and seed collections.

Data and information

USAID recognizes that the capacity to collect, analyze, and disseminate data is an important part of monitoring and assessing biodiversity status and trends and managing natural resources. The Agency supports these efforts through most of its projects. For example, USAID supported the addition of the new Department of Biodiversity Information and Valorization in Madagascar's National Association for the Management of Protected Areas. This unit will focus on environmental information and monitoring, and a Geographic Information System (GIS)-based conservation data bank. Conservation and environmental data systems and centers and mapping and monitoring efforts were also supported in Jamaica, Belize, Brazil, Panama, Nepal, and Uganda. A germ-plasm data management system is part of

the *Plant Genetic Resources* project in India.

Fostering communication and exchanging information and lessons learned is also an important part of USAID's approach. The ***Regional Environmental and Natural Resources Management*** (RENARM) project supported the publication of *The Green Book: An Environmental Policy Sourcebook* [1] to facilitate understanding of policy issues in *Central America and a Rapid Ecological Assessment Manual* [2] to share information about this important biodiversity assessment technique. RENARM also helped sponsor the First Regional Conference of the MesoAmerican Biodiversity Legal Project.

Publishing policy papers on lessons learned, management models, and expanding information networks is a key element of many other projects USAID supports, including the global ***Coastal Resources Management Project, the Environmental Planning and Management*** project, and the ***Natural Resources Management Project*** for southern Africa. A *Directory of Country Environmental Studies* [3] provides a guide to national plans, strategies, impact assessments, and other important publications.

Encouraging Participation

USAID increasingly emphasizes activities that build on the recognition that local participation is a critical prerequisite for conserving biodiversity. Often, NGOs are best able to catalyze such participation, thus collaboration with them has become an important component of USAID environmental assistance. For example, the BSP, with more than 300 activities in 60 countries, helps local institutions and NGOs test new approaches, answer critical research questions, and build indigenous capacity to enhance biodiversity conservation initiatives worldwide.

USAID also seeks the broader perspective of key regional scientists and policy makers. For example, USAID supported the ***African Biodiversity Consultative Group***, an organization of African development and conservation experts representing East, West, Southern and Central Africa, to incorporate African input on USAID strategies for biodiversity conservation. The group worked closely with BSP to produce a strategy report for USAID's Africa Bureau. This strategy is a biodiversity policy statement which reflects significant African perspectives, and concerns, as well as technical input.

In Asia, the ***Biodiversity Conservation Network*** (BCN) under the ***U.S.-Asia Environmental Partnership*** helps foster innovative partnerships in order to increase the economic value of biological resources in threatened habitats and to make their use more sustainable in the long term. The project is also developing a regional network to exchange conservation information and capture lessons learned.

The ***Biodiversity Support Program*** (BSP) has led USAID efforts in the development and implementation of conservation plans with true participation of local conservation experts and local leaders. In Papua New Guinea (PNG), BSP conducted a 15-month Conservation Needs Assessment as part of the country's Tropical Forest Action Plan. The assessment is helping identify conservation priorities and implementation plans and promoting dialogue among PNG landowners, who have strong

customary, economic, and legal incentives to use and conserve natural resources sustainably.

The Miskito Cays Protected Area in Nicaragua is one illustration of why and how nongovernmental and local partners should be engaged. This large expanse of wilderness includes some of the richest sea grass pastures, coral reef and estuarine ecosystems in the region, providing foraging grounds for both endangered species and economically important fisheries. Under the *Natural Resources Management* project, a master plan for the area is being developed with the cooperation of 34 communities that live in the protected area and depend on its resources. They have helped identify traditional local resource users through a participatory mapping process. A local NGO also serves on the protected area commission to incorporate local interests into continued planning and management.

Engaging nongovernmental and local participation in all levels of natural resource management—from the development of national environmental strategies to local action plans and projects—improves the likelihood of success and is strongly supported by USAID programs.

Sustainable Use of Biodiversity

USAID fully recognizes the value of biodiversity and the role it can play in economic development. The cornucopia of plants and animals and the ecosystems they inhabit represent a significant economic asset to developing nations, providing timber and nontimber forest products, a reservoir of genetic diversity, opportunities for ecotourism, and environmental services such as watershed protection. Both consumptive and nonconsumptive uses have great value, particularly for local communities and markets. In addition, the benefits to the national economy from intact ecosystems can greatly exceed the value of extracted timber or conversion of forest for agriculture, cattle raising, or tree plantations.

Early examples of USAID-supported projects that were designed to foster sustainable use and community development are known as integrated conservation and development projects (ICDPs). ICDPs seek to enhance the conservation of biological diversity by focusing on the social and economic needs of people living in nearby communities. ICDPs operate on the principle that conservation and natural resource management efforts are more likely to be successful and sustainable if local people are partners in the process, if they are empowered to make decisions, and if they see economic or social benefits. Properly implemented, ICDPs can successfully balance the needs of local people and the environment. The lessons learned and the concepts developed in earlier ICDPs have been applied to the design of projects supporting the sustainable uses of biodiversity. Some of these newer projects also work to support national level changes that enable community management and sustainable use.

Currently, USAID is supporting major projects that enhance the value of biodiversity by developing sustainable uses in Costa Rica, Ecuador, Guatemala, Kenya, Madagascar, the Philippines, the South Pacific, and Southern Africa. The *Sustainable Approaches to Viable Environmental Management* project is part of USAID's effort to support Madagascar's NEAP through sustainable community development in threatened natural areas. The project provides grants to develop and implement joint, interactive management plans for development and conservation activities in protected

areas and surrounding zones. The project will also produce guidelines for the design of other ICDPs.

In Southern Africa, USAID is supporting pioneering efforts in community-based management of wildlife and other natural resources through the regional *Natural Resources Management Project* (NRMP). The project also shows that sustainable use of wildlife can be a viable economic alternative to farming marginal lands. The project is supporting Zimbabwe's *Communal Areas Management Program for Indigenous Resources* (CAMPFIRE) program, a model for the region, which has clearly demonstrated that communities will act to conserve wildlife when they share the economic benefits it provides. NRMP also supports similar efforts in Namibia through the *Living in a Finite Environment* (LIFE) program and in Zambia through the *Administrative Management Design for Game Management Areas* program.

The principle behind the *Biodiversity Conservation Network* (BCN) of the *U.S.-Asia Environmental Partnership* is that biodiversity conservation can be enhanced by supporting entrepreneurial or subsistence activities that depend on sustainable use of biological resources. BCN is strengthening the capacities of local communities, NGOs, government agencies, researchers, businesses, and others to develop community-based enterprises that both use and conserve biological resources. BCN grantees are testing an approach to conservation that links the viability of an enterprise to the conservation of the biological resource being harvested. Biological and social monitoring is carried out to ensure sustainable levels of harvest and document the efficacy of the approach. By also facilitating the exchange of data collected and lessons learned, BCN expects to eventually influence conservation policy at the national, regional, and international levels.

USAID's seven-year, \$11 million *Maya Biosphere Natural Resources Management* project is helping Guatemala's National Council for Protected Areas to, among other goals, promote ecotourism and sustainable extraction of nontimber forest products in and around the reserve, a biologically rich area in MesoAmerica's largest remaining wilderness.

In Ecuador the *Sustainable Uses for Biological Resources* (SUBIR) project is a seven-year, \$9 million effort to identify, test, and develop economically, ecologically, and socially sustainable resources management models in three parks and their buffer zones. SUBIR supports policy analysis and training, organizational development, protected area management, ecotourism development, improved land use, and research and monitoring. It has also been influential in creating a commission to develop a "smart wood" program to certify lumber that has been harvested using sustainable, ecologically sound methods.

ICDPs and sustainable use efforts are still a relatively new approach. As such, it is vital that these innovative efforts be monitored as test cases and the lessons learned disseminated. USAID supports this learning process in each project as well as through several multicountry projects, such as the global BSP.

USAID's support for the sustainable use of biological resources, and the equitable sharing of benefits of that use, extends well beyond the innovative conservation activities discussed above. Through its

support for sustainable agriculture, forestry, fisheries and aquaculture, USAID is encouraging research, economic growth, and productive employment opportunities that do not exhaust the resources of a country. Of particular relevance to the use of genetic resources is the ***Agricultural Biotechnology for Sustainable Productivity*** project, which seeks to enhance both U.S. and developing country institutional capacity for biotechnology research to develop improved, environmentally compatible germ plasm. The project has sponsored workshops and internships for developing country partners in biosafety and intellectual property rights, two important policy areas that support the goals of the Convention on Biological Diversity and are crucial to effective biotechnology management.

Innovative Financing Mechanisms

USAID has been a leader in supporting biodiversity conservation through innovative financing mechanisms. USAID assisted the first pioneering debt-for-nature swaps and is helping develop private, self-financing conservation endowments. For example, USAID recently completed a proposal to establish the ***Indonesian Biodiversity Foundation*** (IBF) with an endowment for the long-term financing of innovative and sustainable management of Indonesia's enormous biological wealth. The endowment will allow the IBF to issue small grants to local NGOs and communities to participate in the country's National Biodiversity Action Plan. This project, part of USAID's contribution to the Global Environment Facility (GEF), represents an innovative example of USAID collaboration with other donors.

Environmental endowment funds provide both long-term stable funding and local control over the management of money and priorities. Some funds provide a way for NGO efforts to complement government reforms and initiatives, others support specific ministries, protected areas or projects. Examples of projects providing endowment funds include the \$20 million USAID contribution to the ***Mexico Nature Conservation Fund***, designed to provide mid- and long-term financing to strengthen the capacity of Mexican organizations to conserve biodiversity; the ***Knowledge and Effective Policies for Environmental Management*** project which complements the National Environmental Action Plan in Madagascar; and the ***Development of Environmental Management Organizations*** in Jamaica. Other USAID environmental endowments and debt-for-nature swaps include the \$9 million ***Natural Resource Conservation and Historic Preservation*** project in Ghana, the National Parks Trust Fund in Jamaica, as well as projects in Bolivia, Guatemala, Honduras, Panama, the Philippines, and Zambia.

The U.S. government's ***Enterprise for the Americas Initiative*** serves to complement a transformation already under way in Latin America and the Caribbean, where the combination of debt reduction by commercial banks, support from international financial institutions, and economic reforms has ushered in a new era of growth. The United States has developed agreements with seven countries (Argentina, Bolivia, Chile, Columbia, El Salvador, Jamaica, and Uruguay) to reduce their bilateral debt by establishing local currency funds to support environmental and child survival projects. The environment component employs a grass-roots development approach to nurture local NGO communities and foster NGO collaboration with the host government.

Market-based solutions can also provide funding and incentives for the conservation and sustainable use of biodiversity. Cultural Survival Enterprises received a \$3 million line of credit from USAID to help local communities develop marketing channels for the sustainable use of nontimber forest resources such as nuts, fruits, oils, and essences. Guidelines developed in conjunction with communities, NGOs, and USAID provide an outline for close monitoring over the life of the project for impacts on local biodiversity. The maintenance and conservation of biodiversity is safeguarded through this process.

Strengthening Coordination

USAID believes it can improve its own effectiveness by working more closely with other donor agencies to reinforce and coordinate efforts in a time of growing needs and constrained resources. USAID's programs illustrate its growing commitment to building partnerships with host countries and collaborative efforts with other international development agencies. In addition to examples already mentioned, many other USAID activities relevant to the conservation of biodiversity involve cooperation with other bilateral and multilateral programs. For example, USAID contributed \$3 million to the U.N. Development Programme to support the GEF Small Grants Program. USAID is supporting a Multidonor Secretariat to coordinate donor activities in the environmental sector in Madagascar and supports the development of NEAPS throughout Africa and elsewhere. In the Russian Federation, USAID is collaborating with private U.S. charitable foundations to support a land use policy project at Lake Baikal. One of the subprojects designed to demonstrate models of sustainable economic development is a management program for the Ivano-Arakhley Lakes Wildlife Refuge. The U.S. Environmental Protection Agency and USAID are collaborating on other aspects of the Russian *Environmental Policy and Technology* project.

USAID also cooperates with other U.S. government agencies involved in research, training, extension, and other activities that contribute to the conservation of biodiversity. In the *Forest Resources Management* project, USAID collaborates with the Forest Service and Peace Corps to provide technical assistance, information, and training in forest and biodiversity management efforts worldwide. A few of the many activities include social forestry and natural forest management, a study of biodiversity monitoring in Kenya and Uganda, and assistance to develop a national biodiversity strategy for Russia. In the arena of cooperation with international organizations, USAID actively participates in the Forestry Advisors Group, the International Tropical Timber Organization, the Consultative Group for International Agricultural Research, and the Commission for Sustainable Development.

USAID is also working to fulfill commitments to fair and equitable sharing of benefits arising out of the use of genetic resources embodied in the Convention on Biological Diversity. In cooperation with the U.S. National Science Foundation and the National Institutes of Health, USAID is collaborating with developing countries on an innovative program of pharmaceutical discovery and biodiversity conservation. The **International Cooperative Biodiversity Groups** (ICBG) is a \$10 million, five-year program to facilitate the discovery of medicines from natural areas in the tropics. The research and analysis is conducted by U.S. and host country scientists, with training provided to strengthen capacity to conduct biological inventories and remove plant extracts. Arrangements have been made to

ensure that any potential royalties will be distributed equitably among commercial enterprises and local communities.

In all these programs, USAID is providing leadership in the international community and building partnerships with host countries. The goal of these partnerships is to enable countries to sustain economic growth and improve the quality of life, while conserving their biological resources and options for present and future generations.

[1] U.S. Agency for International Development Bureau for Latin America and the Caribbean, *The Green Book: An Environment Policy Sourcebook* (Washington, D.C.: USAID, 1992).

[2] Claudia Scbravila and Paquita Bath, *Rapid Ecological Assessment Manual* (Arlington, VA: The Nature Conservancy, 1992).

[3] U.S. Agency for International Development, *A Directory of Country Environmental Studies* (Washington, D.C.: USAID,).

A Century of U.S. Concern for Conserving Biodiversity

The United States has a long history of action to conserve biological diversity. The Lacey Act of 1900 was an early legislative initiative to support in situ conservation of wild animals; 25 other federal laws have strengthened the mandate for protection of on-site diversity since that time, including the Endangered Species Act of 1973. The United States has also played a leadership role in international environmental efforts, including the Stockholm Conference on the Human Environment in 1972, the establishment of the United Nations Environment Programme (UNEP), the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), and the World Heritage Convention.

Amendments to the Foreign Assistance Act in 1979 and 1986 laid the basis for USAID's programs in environment and natural resources management, specifically emphasizing efforts to conserve tropical forests and biological diversity. Domestic programs have tended to focus upon efforts to protect threatened species individually. U.S. development assistance programs, however, have generally focused more on multispecies habitat protection, research to determine priorities, projects that conserve ecosystems, and support for policies that will lead to ecosystem maintenance.

Toward More Sustainable Biodiversity Conservation and Development:

Improving Social Analysis and Gender Participation

A basic strategy of the U.S. Agency for International Development is to promote sustainable development through the full participation, involvement, and empowerment of all people—both women and men—at all stages of the development process. The Agency's strategy takes into account gender and the specific inclusion of women as central variables for success:

Development assistance must address the specific needs of women in developing nations, especially health, education, equal access, participation in society, and empowerment. In their design and implementation, programs must take gender issues into account. The ultimate success of our work will be determined by the impact it has upon the lives of the women and men it is designed to assist. [1]

USAID is increasingly taking into account the relationship between natural resource management, participatory development, and gender. USAID fosters the inclusion of gender concerns through a comprehensive strategy for its own programs, through specific project interventions, including biodiversity efforts, and through the disaggregation of data by gender to reveal the full extent of women's work to manage the natural resources of their surroundings.

Three global USAID projects, supported in part by the Office of Women in Development, involve natural resource management, community organizations, and gender.

Ecology, Community Organization and Natural Resources (ECOGEN), a project of Clark University and Virginia Polytechnic Institute and State University, explores the ways in which attention to gender may increase the equity and effectiveness of natural resource management programs.

Development Strategies for Fragile Lands (DESFIL) focuses on the participation of local resource users, whether men or women, in promoting sustainable management of tropical lowlands and steplands.

Gender in Economic and Social Systems (GENESYS) supports research, training, and information on gender and natural resources.

USAID uses gender analysis to evaluate the impact on women of its programs and projects linking biodiversity, natural resource management, and community development. Several issues have emerged through gender analysis.

In southwestern Uganda, for example, gender analysis has identified an impediment to women's participation in the tree planting movement. Because tree planting infers land rights normally reserved for men, women are disallowed by custom from planting trees or reaping their benefits. Preparations for USAID's *Action Program for the Environment* identified changes in land tenure laws required for removing this gender bias. [2]

Women's access to environmental information may be limited because they speak only a local language. In Chiapas, Mexico, site of several of USAID's *Parks in Peril* activities, park staffers are tailoring educational outreach programs to better communicate to women. In El Ocote, for example, radio spots on ecological issues have been produced in the Tzotzil language specifically to reach local community women, most of whom do not speak Spanish.

The importance of full community participation in biodiversity and community development projects is underscored in many projects.

For example, the USAID Southern Africa Development Coordinating Committee *Natural Resources Management Project* supports pilot activities that allow both men and women to gain income through community-based resource management. An innovative part of the project introduced in Malawi by the Department of National Parks and Wildlife specifically targets women for training as scouts in the traditionally male-dominated park system. The project also supported environmental and socioeconomic impact studies for sustained use of specific resources, such as botanical sources of teas and medicines that are produced by women.

In the Caprivi area of Namibia, as in many parts of Africa, women are the primary subsistence agricultural producers. Therefore, USAID's *Living in a Finite Environment* project has hired local women as "resource monitors" to report on crop damage by elephants and to suggest possible solutions. Project staff also work with women farmers and others to examine the impacts on local ecology and gender aspects of collecting thatch grass, an important resource. In Bushmanland, community leaders, recognizing women's interests in natural resource management, have requested project assistance in ensuring women's participation in decision making.

While most gender analysis is done at the community level, some USAID-supported projects are trying to improve women's participation at the national level.

For example, the *Action Program for the Environment* organized a workshop to help integrate gender into Uganda's National Environmental Action Plan (NEAP) process and provide a report to guide continuing NEAP policy development.

The USAID mission in Niger sponsored workshops to integrate gender concerns across the board in all its projects. *GENESYS* provided training for mission and project staff, including the staff of the *Agricultural Sector Development Grant II* project.

Gender and social analysis highlights the roles of both men and women in managing natural resources and contributes to USAID's theme: "putting people first." From the development of NEAPS to community-level resource management, USAID is manifesting its recognition that women are central partners in development and their participation must be supported and encouraged.

[1] Mary Hill Rojas, Kara Page and Stephanie Joyce, DESFIL Reports (July 1994, No. 1.)

[2] Sarah Norton-Staal, Gender Issues in the USAID/Uganda Action Program for the Environment (Washington, D.C.: USAID, June 1991.)

Setting Conservation Priorities

USAID has embarked on a unique effort to identify geographic areas that merit special attention because of their global importance for biodiversity conservation. This effort grows out of the Clinton Administration's and USAID's commitment to address biodiversity loss as a threat to the global environment. USAID programs will maintain a special focus on two types of geographic areas: those richest in biodiversity and facing the greatest threat, and those that are the least disturbed and present the greatest opportunity for long-term conservation. The development and application of a logical and transparent framework for identifying priority areas for biodiversity conservation from a global perspective will represent a significant improvement over the ad hoc decision making that has characterized much bilateral and multilateral agency biodiversity funding to date. An important assumption of this effort is that any list of priority areas will not be an exclusive list for USAID biodiversity funding. Clearly, biodiversity and biological resources are important to every country's sustainable development. Thus, USAID also supports biodiversity conservation and sustainable use as part of the local development strategy on a country-by-country basis.

USAID has asked the *Biodiversity Support Program* (BSP), in collaboration with World Wildlife Fund, Conservation International, The Nature Conservancy, World Resources Institute, and the Wildlife Conservation Society for assistance in this effort. USAID and its collaborators are focusing first on the Latin America and Caribbean region.

USAID bases its analysis on ecologically distinct biogeographic units (ecoregions) within major habitat types rather than country units. The object is not to choose between various major habitat types but to identify ecoregions within each major habitat type for additional investment. To do this, the framework assesses and combines three parameters: (1) the biological value of an area; (2) the threat the area confronts and the conservation opportunity it presents; and (3) the policy and institutional characteristics and the potential human utility of the area's known biodiversity. Another innovative aspect of the framework is its use of spatial data for each parameter and subsequent analysis by overlaying the data onto base maps by means of a geographic information system (GIS).

In September 1994, a workshop in Miami brought together 75 regional experts, most from Latin America and the Caribbean, including biologists, social scientists, conservationists, USAID staff and other development professionals, representatives of the nongovernmental organization (NGO) working group, and a GIS team. Their task was to review the data, refine the methodology, and draft a list of priority terrestrial sites in Latin America and the Caribbean. (A separate workshop will focus on coastal

and mangrove areas.) The workshop will result in the development of several useful tools and products:

A set of biological priority maps for Latin America and the Caribbean based on species richness, phyletic diversity and endemism in selected taxa and on predictors of community and ecosystem distribution such as soil complexity, elevation, and rainfall.

A conservation status and opportunity map for the ecoregions. Assessments of conservation status were based on variables such as percentage of original habitat remaining, degree of fragmentation, degree of protection, nature and degree of degradation, and threat.

An assessment of the policy and institutional environments of countries in the region using indicators such as participation in international treaties, development of national biodiversity strategies or action plans, and donor and internal funding for biodiversity as well as some standard measures such as per capita gross domestic product, Overseas Development Assistance, and literacy rates.

A diagnostic method for integrating layers of data into an innovative framework for conservation decision making.

In addition, the participants identified gaps in knowledge and available data and other measures and indicators that would be valuable for conservation planning.

The organizers recognize that the coarse scale of resolution (1:10,000,000) required by the large size of the geographic region being analyzed in this first exercise will result in a preliminary list of investment priorities only. A more specific list of priorities at a finer scale of resolution could be developed by repeating the exercise for each major habitat type or on a country level.

Lessons from the Latin American and Caribbean workshop experience will be applied to similar exercises planned for Asia and the Pacific region. A report on the workshop and its recommendations, and their methodologies will be issued in late 1994. The products and processes developed will be coordinated with other multilateral efforts and are expected to have applications beyond USAID's program, to benefit developing country governments, NGOs, and other international donors in formulating their own conservation priorities and strategies.