USAID
FROM THE AMERICAN PEOPLE

USAID'S BIODIVERSITY CONSERVATION PROGRAMS

FY 2004

DECEMBER 2005

BIODIVERSITY CONSERVATION

USAID'S BIODIVERSITY CONSERVATION PROGRAMS FY 2004

DECEMBER 2005

Cover Photo
PHILIPPINE FISHERMAN: Fishers in the Philippines and around the world are often the poorest members of society. Their livelihoods depend on diverse and abundant wild fisheries. Many of USAID's biodiversity programs work to restore and protect marine and coastal ecosystems while also providing sustainable harvests of fish to local communities.
Photo source: Sean Killian, Chemonics International

TABLE OF CONTENTS

Executive Summary iii

Water and Coastal Biodiversity Conservation 1
A Ridge-to-Reef Approach 2

Africa 7
Highlight: Madagascar 8
Africa Regional Program — Office of Sustainable Development 12
Africa Regional Program — Regional Center for Southern Africa 12
Central African Regional Program for the Environment/Congo Basin Forest Partnership 14
The Democratic Republic of the Congo 16
Ghana 17
Guinea 18
Kenya 20
Liberia 21
Malawi 22
Mozambique 24
Namibia 25
Nigeria 27
Senegal 28
Tanzania 30
Uganda 33
Zambia 34

Asia and the Near East 37
Highlight: Iraq 38
ANE Regional Program 42
Afghanistan 43
Bangladesh 45
Cambodia 46
Egypt 47
Indonesia 48
Nepal 50
Philippines 51

Europe and Eurasia 53
Highlight: Russia 54

Latin America and the Caribbean 57
Highlight: Jamaica 58
LAC Regional Program — LAC Support Team 62
LAC Regional Program — Parks in Peril 62
LAC Regional Program — Amazon Basin Conservation Initiative 63
Caribbean Regional Program 63
Regional Environmental Program for Central America 64
Bolivia 66
Brazil 67
Colombia 69

Dominican Republic 70
Ecuador 71
Guatemala 72
Honduras 74
Mexico 75
Nicaragua 76
Panama 77
Paraguay 80
Peru 81

Centrally Funded Programs 83
EGAT/NRM — Biodiversity Team 83
EGAT/NRM — Forestry Team 85
EGAT/NRM — Water Team 87
EGAT/NRM — Land Resources Management Team 88
EGAT/Agriculture — Collaborative Research Support Program 90
EGAT/Agriculture — Israeli Programs 91
EGAT/Environment and Science Policy 91
EGAT/Poverty Reduction Office 93
DCHA/Conflict Management and Mitigation Office 93
Global Health/Population, Health and Environment Program 94
The Global Development Alliance 96

USAID's Biodiversity Programs and Activity Funding, FY 2004 99

Annexes
I. Section 119 of the Foreign Assistance Act 103
II. Acronyms 105

Boxes
1 Objectives of USAID-supported Marine Protected Area Programs 4
2 A New Vision 11
3 Community Management Achieves Economic and Environmental Security in Tanzania 30
4 The Marshes of Southern Iraq 40
5 Environmental Management in the Philippines 52
6 Protecting the Great River Watershed in Jamaica 61
7 Conserving the Habitat of Neotropical Raptors 79
8 Sites Supported under GCP II 84

Figures
1 USAID Funding of Biodiversity Conservation, 1987-2004 99
2 USAID Funding for Biodiversity Conservation by Region in FY 2004 102

Maps
Global 200 Marine and Freshwater Ecoregions 1
Patterns of Diversity in Reef-Building Scleractinian Corals 4
Southern Africa River Basins 12
The Congo Basin 14
The Amazon Basin 62

Tables
1 Public-Private Alliances for Biodiversity Conservation, FY 2004 97
2 USAID Biodiversity Programs and Activity Funding, FY 2004 100
3 U.S. Government International Biodiversity Funding, FY 2004 101

EXECUTIVE SUMMARY

This report summarizes the U.S. Agency for International Development's (USAID) Fiscal Year 2004 budget investments, implementation activities, and accomplishments in biodiversity conservation. In FY 2004, USAID devoted more than $155 million in Development Assistance funds and more than $15 million in other funds toward biodiversity conservation in more than 60 countries spanning Africa, Asia and the Near East, Europe and Eurasia, and Latin America and the Caribbean.

USAID's large investment, coupled with the Agency's significant technical expertise, demonstrates USAID's leadership in international conservation. Using integrated landscape and seascape management at multiple scales, USAID works toward conservation of well-functioning, sustainable natural ecosystems on which all species, including humans, depend.

Biodiversity conservation activities respond to Section 119 of the Foreign Assistance Act, which instructs USAID to make a special effort to continue, and increase assistance for, sound wildlife habitat management and plant conservation programs (Annex I). Biodiversity conservation and environmental stewardship are vital components of sound development. USAID country programs are also required to conduct a biodiversity assessment as part of their regular strategic planning. Directives such as these illustrate the importance the U.S. Government places on preserving biodiversity for current and future generations.

MICHAEL COLBY, USAID

BENEFITS OF CORAL REEFS: This Egyptian coral reef represents one of the most diverse ecosystems on earth. It provides coastal protection from storm surges, livelihoods from tourism, and nursery habitat for vital ocean fisheries.

MARINE ECOTOURISM: The tourism businesses supported by snorkelers in Sulawesi, Indonesia provide essential income to local communities and governments.

USAID promotes sustainable tourism through training of hotel and tour operators, collection of park fees, and capacity building for enforcement of reef rules.

BURT JONES & MAURINE SHIMLOCK, SECRET SEA VISIONS, INC.

THE NATURE CONSERVANCY

INDONESIAN FISHERIES MANAGEMENT: Park rangers in Wakatobi Marine National Park interview a local fisherman about his fish catches, the location of the capture, and his gear. With support from USAID partner The Nature Conservancy, the park managers share this information with local communities to create rules together for sustainable fishing.

This report covers the full range of USAID's biodiversity conservation activities, but highlights work on aquatic biodiversity. The oceans, and particularly coral reefs, contain vast biodiversity with new species discovered every day. Freshwater ecosystems are no less critical, providing us with protein food sources and the fresh water we need to survive.

USAID promotes aquatic biodiversity conservation through integrated water and coastal management. This comprehensive approach underscores the importance of sound economic development and good governance to achieving sustainable conservation objectives. Conversely, the Agency's aquatic and terrestrial conservation activities can have significant economic growth and governance impacts, contributing to USAID's main objectives of reducing poverty, promoting good governance, and building democratic societies.

The economics of conservation are clear. Economic benefits from conservation of land and water can exceed income derived from other uses. A dramatic example promoted successfully in FY 2004 by USAID — in countries as diverse as Tanzania, Indonesia, Belize and Bangladesh — is the use of ecological reserves as fisheries management tools.

Ecological and fishery reserves provide safe areas for fish to breed and grow, resulting in increased diversity and stability of wild fish populations, while also providing economic benefits through increased fish harvests outside the reserve. Ecological reserves also safeguard the use of future fishery assets. Conservation becomes a tool

for the economic development of fishers, who are often the poorest members of society. The economic development outcome makes it possible for fishers to follow self-imposed fish harvesting guidelines.

Good governance is also essential to conservation success, and conservation activities contribute to good governance. In Madagascar, USAID assisted an ecoregional planning effort to prioritize new national protected areas as part of the President of Madagascar's commitment to triple the land area under protection. It was a model of a participatory decision making process, bringing together regional, communal, and local decision makers. In Brazil, USAID is supporting umbrella organizations that help Brazil's many environmental NGOs share information and become an effective civil society voice for change. Brazil's program, along with many other country programs, also helped indigenous tribes gain property rights over vast territories of natural tropical forest and thus be empowered as active citizens of their country.

USAID's conservation activities, like those described above, will have long-term good governance impacts by enhancing the democratic functioning of government agencies, building capacity of civil societies to participate in policy development, and providing basic rights to citizens.

Overall, in FY 2004 USAID continued to show the positive results of integrated approaches to biodiversity conservation, economic growth, and good governance. This report highlights those accomplishments and the programs and partners who made them a reality.

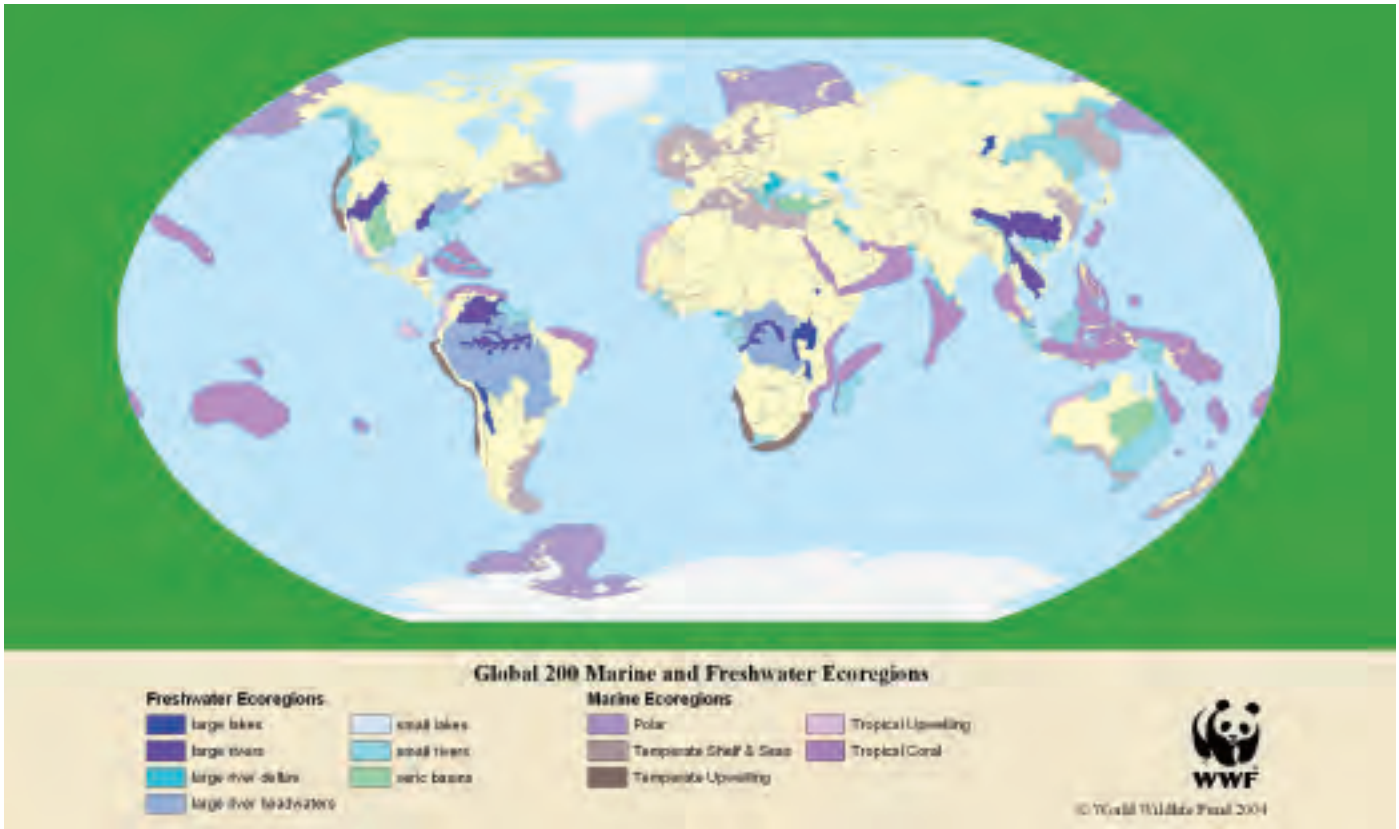
ERIC STONER USAID

AMAZON TRANSPORT: To riverine dwellers, the Amazon is water before it is trees. In order to sustain aquatic and terrestrial biodiversity, USAID works toward the conservation of the Amazon watershed, which empties the earth's largest volume of fresh water into the sea and contains the largest tropical forest in the world.

WATER AND COASTAL BIODIVERSITY CONSERVATION

All life on earth depends on water. In particular, freshwater, estuarine, and marine ecosystems support an abundance of biodiversity and critical habitats. Estimates of the amount of aquatic biodiversity regularly increase, as new marine species become known to science almost every day. Coral reef ecosystems, the most complex ecosystems in the ocean, shelter more than 800 species of reef building corals, thousands of species of fish, and millions of other species. Coastal estuaries and mangroves also abound with diversity and offer high productivity, providing spawning and rearing areas for ocean fish, migratory grounds for birds, and habitat for most important coastal fisheries, including crabs and shrimp.

In addition to providing nursery habitat for coastal fisheries that feed hundreds of millions of people, coral reefs and mangroves protect and support humans living along coasts. The Indian Ocean



A WATERY WORLD: After analyzing the world's water ecosystems, World Wildlife Fund came up with 200 ecoregions that, if conserved, they felt would save a representative level of global aquatic biodiversity. Here the global 200 are presented in a simpler form, categorized by type of ecosystem.

tsunami of December 2004 reinforced the importance of reefs and mangroves as buffers against storms and waves. Tropical coastal tourism is one of the fastest growing sectors of the world economy, and it depends on beautiful and biodiverse coastal and coral reef resources.

Humans exert large pressures on aquatic biodiversity by polluting and degrading water quality, consuming and diverting freshwater supplies vital for maintaining ecosystem function, and practicing poor land-use management which damages the ability of watersheds to purify and regulate water flows. Humans also over-harvest aquatic organisms and use destructive fishing practices that destroy fish habitat. For coral reefs, these impacts are even more serious because corals are also affected by climate variability and change. Recently, coral bleaching due to warmer sea surface temperatures has become a significant threat to this important habitat.

STEVEN SWIERENGA

WATERSHED PROTECTION: A mountain stream in Honduras begins in an intact forest and eventually reaches the sea where it will impact coastal ecosystems and be a source of water for human communities. USAID addresses watersheds as total systems by working with farmers on soil erosion, governments on protected area management, and cities on pollution control.

Damage to aquatic ecosystems and organisms directly impacts human livelihoods and well-being. The poor especially are often dependent on fisheries for protein and income, and agriculture is often limited by the amount of freshwater available. Everyone needs clean water to drink and maintain healthy conditions.

USAID supports many projects and programs that seek to improve management of water and aquatic ecosystems for the conservation of biodiversity and for the provision of services essential to human development. Integrated Water and Coastal Resources Management, an approach promoted by USAID, recognizes that water and coastal management must be approached holistically.

Using an integrated approach, USAID addresses a wide array of land-use activities occurring within a watershed that may have local impacts while affecting downstream communities and ecosystems. This includes critical ecosystem habitats and functions, such as: coastal estuaries and mangrove forests;

critical fish nurseries and spawning sites; and the quality, quantity, and timing of freshwater inflows. USAID also supports activities that manage water resources in transboundary watersheds or coastlines.

A Ridge-to-Reef Approach

Recognizing the benefits of aquatic biodiversity and the threats to its survival, there have been a number of high profile statements in recent years about the need for marine biodiversity conservation and holistic approaches to watershed and marine management.

The White Water to Blue Water Initiative, announced in 2002 at the World Summit for Sustainable Development and led by the U.S. Government, brought together more than 600 people from more than 30 countries in the Wider Caribbean. Participants engaged in discussions and workshops focused on improved governance, finance, and partnerships for enhanced management of coastal and marine resources.

Consistent with that initiative, USAID promotes a holistic approach to freshwater and coastal resources management. USAID's Central American Region 2003 environment strategy requires a ridge-to-reef approach. This approach designs activities with the entire watershed in mind, from the tops of the hills which are often forested, down through agricultural land, and out into coastal areas.

As an example, this report highlights a successful ridge-to-reef effort in Jamaica to integrate improved agricultural practices for soil erosion control with efforts to provide proper human waste management systems (page 61). These activities employed participatory watershed management, holding hope for local ownership, and ultimately improved water quality for humans and downstream coral ecosystems.

From FY 2000 through FY 2004, USAID obligated approximately $125 million in the Wider Caribbean for watershed activities, including the promotion of best management practices in upper watersheds, in both rural and urban water supply, and in wastewater treatment programs for improved coastal water quality and quantity.

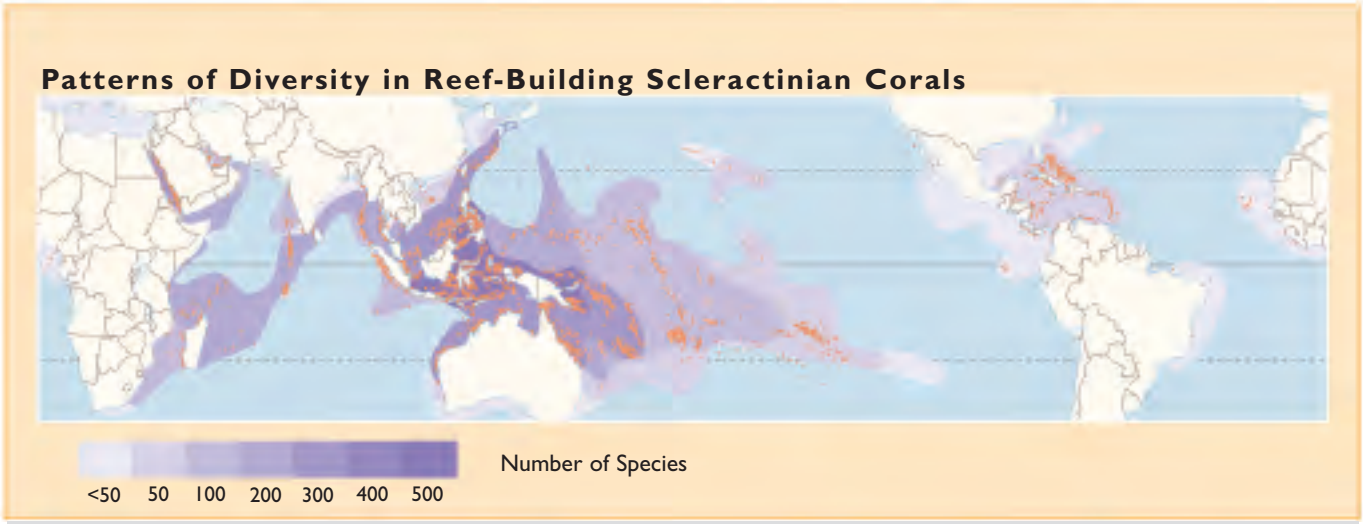
Promoting Marine and Coastal Protected Areas

In September, 2004, the U.S. Commission on Ocean Policy, created by the Oceans Act of 2000 (P.L. 106-256), released its report and recommendations for a balanced approach to protecting the marine environment while sustaining the vital role oceans and coasts play in American lives and the national economy. Among the 212 recommendations, the commission said the U.S. must reshape its oceans policy to reflect an ecosystem-based management approach, establish a system of marine protected areas, reform fisheries management, conserve and protect coral reefs, and promote international leadership on marine and ocean management. In March 2005, the Administration responded favorably to many of these recommendations.

The Commission's recommendations are consistent with those called for at the 2002 World Summit for Sustainable Development.

ANDREAS MULJADI, THE NATURE CONSERVANCY

INDONESIAN FISHERMAN: Although fishing is often a low-tech affair, as shown by this fisherman mending his small nets, most fisheries are already overexploited and species are nearing extinction. USAID works to rejuvenate these fish stocks that may contribute more than 50 percent of the protein intake in Asian countries.



WORLD ATLAS OF CORAL REEFS, UNIVERSITY OF CALIFORNIA PRESS, WITH DATA FROM THE UNEP WORLD CONSERVATION MONITORING CENTRE

The Coral Triangle: Patterns of the numbers of coral species show that Indonesia, Malaysia, Philippines, and Papua New Guinea form a "triangle" of extremely high biodiversity. In general, coral reefs throughout the world are centers of biodiversity and are worthy of conservation.

International leaders called for:

- Establishment by 2012 of a global system of representative networks of marine and coastal protected areas, consistent with international law and based on best available scientific information
- Use of an ecosystem-based approach to management
- Elimination of destructive fishing practices
- Time/area closures for the protection of nursery grounds and spawning periods
- Proper coastal land use and watershed planning including integration of marine and coastal areas management into key sectors
- Development of national, regional and international programs for halting the loss of marine biodiversity, including that in coral reefs and wetlands

The call for more marine protected areas was echoed at the 5th World Parks Congress in 2003 in Durban, South Africa. Participants discussed the important role of protected areas in preventing and alleviating poverty, adapting to global change, and contributing to security. Similarly, at the 7th Conference of the Parties to the Convention on Biological Diversity, in February 2004, 188 governments agreed to establish comprehensive, ecologically representative, and effectively managed and financed national and regional systems of protected areas. They agreed to establish terrestrial systems by 2010 and marine systems by 2012.

One reason so many governments are committed to marine protected areas is that they are effective conservation and fisheries management tools. Networks of protected areas and integrated coastal management utilize multiple-use zones to establish ecological reserves where fishing is restricted within defined areas or time periods, allowing reproduction to take place and healthy, productive habitats to thrive. Human uses are allowed in other places or times that are less sensitive. The result is often an increase in fish size and numbers

Box 1. Objectives of USAID-supported Marine Protected Area Programs

- Strengthened management of protected areas
- Habitat and biodiversity conservation by addressing threats to the biodiversity
- Improved environmental management by public and private organizations and individuals
- Sustained livelihoods, employment diversification, income generation and poverty prevention
- Reduction of negative impacts from international trade and destructive fishing practices
- Sustainable tourism and fisheries
- Reduction of land-based sources of pollution and improved coastal watershed management

available for human consumption, along with more stable, less threatened marine ecosystems. Integrated approaches to management also address upstream issues such as watershed degradation, which cause increased sediment loads that can smother coral reefs.

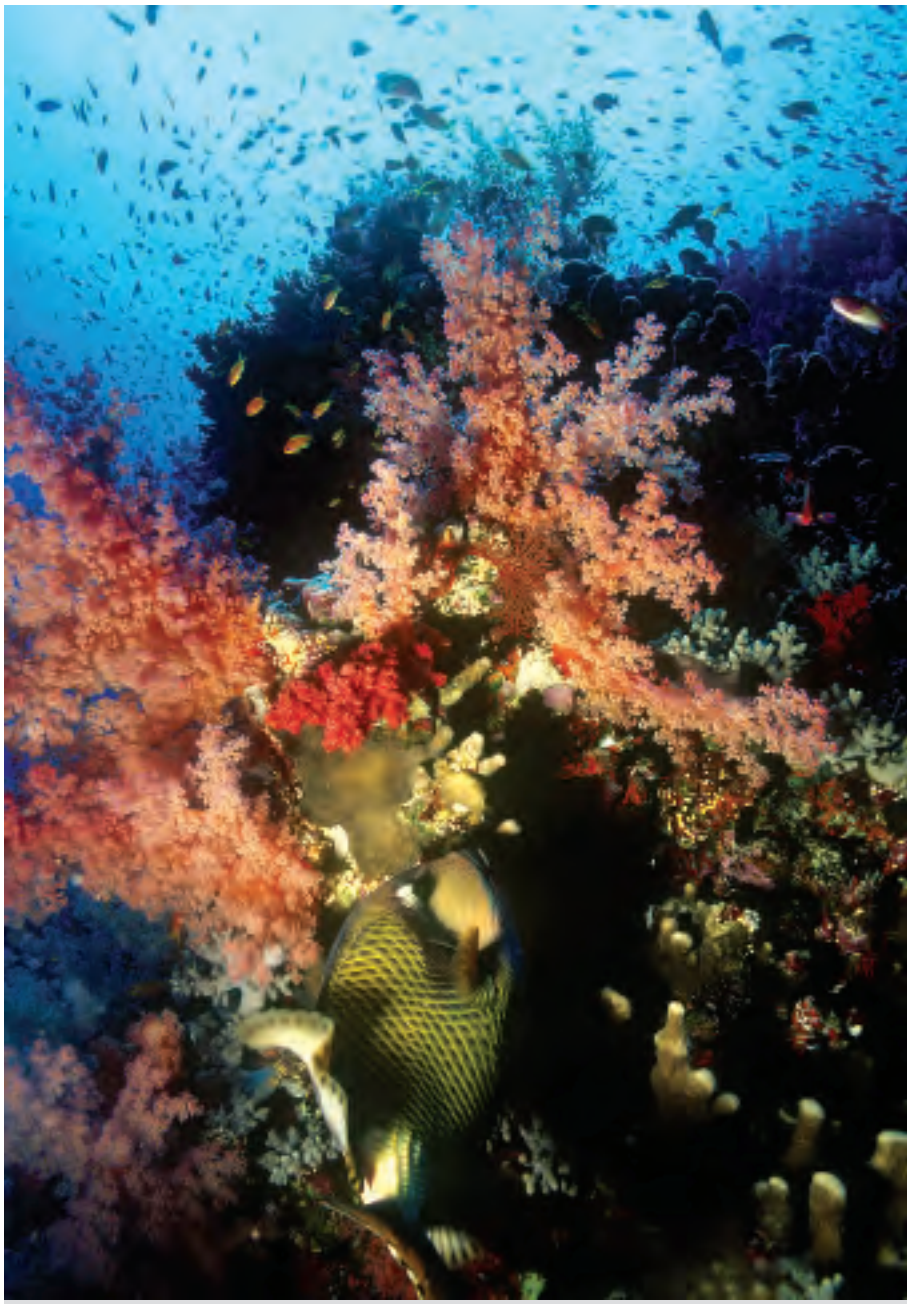
Currently, USAID supports a large number of marine protected area systems, many with extensive coral reef ecosystems, including:

1. Meso-American Reef Ecoregion in Central America and Mexico
2. Eastern Caribbean and Lesser Antilles
3. Sulu-Sulawesi Sea Ecoregion in Indonesia, Malaysia, and the Philippines
4. Wakatobi Islands of Sulawesi, Indonesia
5. Raja Ampat islands of Papua, Indonesia
6. Kimbe Bay and Bismarck Sea, Papua New Guinea
7. Eastern African Marine Ecoregion in Kenya, Tanzania, and Mozambique
8. National networks in Jamaica, Indonesia and the Philippines

U.S. Coral Reef Task Force

The U.S. Coral Reef Task Force (USCRTF) was established by Executive Order in 1998 to coordinate US domestic and international efforts to conserve coral reef ecosystems. The Task Force is composed of twelve federal agencies, seven state and territory partners, and three non-voting Freely Associated States. USAID co-chairs the International Working Group of the USCRTF along with the State Department. USAID's activities in over 20 countries support the international charge of the Executive Order to (1) assess the U.S. role in the international trade of coral reef species; (2) develop an appropriate, broad-based strategy for mitigating the negative impacts of international trade; (3) develop and implement strategies and activities for the protection and sustainable use of coral reef resources worldwide; and (4) implement the International Coral Reef Initiative's (ICRI) Framework for Action through expanded cooperation with ICRI partners.

During FY 2004, USAID and other USCRTF partners successfully



MICHAEL COLBY, USAID

SOFT CORALS IN EGYPT: A Titan triggerfish swims among soft corals in the Red Sea. To preserve this and similar coral ecosystems, USAID works in Egypt and around the world to design, establish, manage, and finance a global system of marine protected area networks.

worked to increase protection for coral reef species through the Convention for International Trade in Endangered Species of Fauna and Flora (CITES). At the 2004 CITES Conference of Parties meeting, efforts by several USG agencies and international partners prevented a loophole in CITES definitions that could have exempted tons of coral "live rock" from the treaty's provisions each year. Decisions were also made to regulate the international trade in live Humphead wrasse and to adopt a voluntary export minimum size of 10 cm for wild-caught seahorse specimens.

USAID's field work also supports USCRTF objectives and strategies. For example, in Tanzania and Indonesia USAID supported an approach to link national policies and government agencies (e.g. national coastal and marine protected areas frameworks) with local actions (e.g establishing and managing marine reserves for coral reef fisheries). This successful model was then replicated by the USCRTF by facilitating development of Local Action Strategies in the US. USAID partners from Tanzania were instrumental in facilitating the transfer of this successful model to the US context.

Other Aspects of USAID's Approach

Successful conservation, such as exemplified by USAID's activities in Tanzania, embraces a strong governance component; activities involve long-term management and commitment by a diversity of stakeholders towards a shared vision of sustained development. Usually this involves meaningful co-management of the resource, whereby governments, communities, individuals, and the private sector act together to identify priority needs and design and implement solutions.

Governance activities often involve clarifying access and tenure rights to the resource. For example, in Bangladesh, USAID helped communities gain long-term leases on freshwater wetlands, allowing them to set aside areas as ecological reserves (page 45). As a result, fish species diversity and quantity recovered quickly and dramatically. This was possible because of national-level decentralization policies, illustrating that governance is also crucial at the policy level. USAID supports governments in the development of legal and institutional tools, as well as the monitoring and evaluation necessary to provide feedback to guide future policy and implementation action.

Other activities USAID supports as part of integrated water and coastal management include reducing industrial pollution that feeds into aquatic ecosystems, promoting sustainable tourism, and promoting improved agricultural practices and "green" products. Destructive fishing (the use of explosives, poisons, and bottom-trawling), over fishing, and adverse trade impacts are also addressed. For example, USAID is supporting efforts of the World Wildlife Fund (WWF) to mitigate impacts from fishing gear through promotion of a circle hook designed to lower turtle by-catch in commercial long-line fisheries. Finally, many USAID activities include components to raise environmental awareness among and promote stewardship by communities for long-term, sustainable management of freshwater, coastal, and marine biodiversity.

PATRICK SMITH, USAID

BANGLADESHI FISH SANCTUARY: In Srimangal a fisherman guards his community's fish sanctuary where deeper water allows breeding populations of native fish to hide during the dry season, ready to reappear when monsoons flood the lowlands. USAID's Management of Aquatic Ecosystems through Community Husbandry (MACH) project helps local communities manage their fish sustainably, feeding thousands.

AFRICA

The African continent is home to the world's greatest concentration of large mammals, the world's second largest tropical rainforest, and important desert, wetlands, and coral reef ecosystems. These diverse habitats support an impressive array of flora and fauna, including more than 50,000 known plant species, 1,000 mammal species, and 1,500 bird species. The richness and diversity of ecosystems is central to the livelihoods of rural Africans, an estimated 70 percent of whom depend on natural resources for their livelihoods.

In recognition of the important role of natural resources and biodiversity in Africa, USAID supported biodiversity conservation activities in more than 25 countries across the continent, with more than $54 million in funding in FY 2004.

Significant FY 2004 Conservation Achievements:

- In Madagascar, USAID helped the government identify and delineate an additional 7.7 million hectares for new conservation sites.

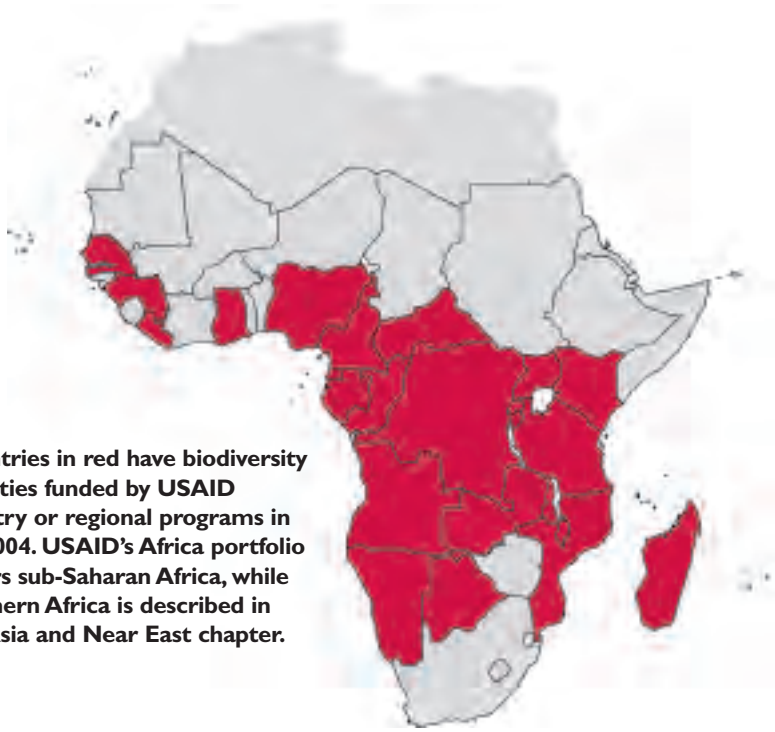
- In Uganda, FY 2004 monitoring results indicate that mountain gorilla populations are the highest registered since the 1960s.

- In Namibia, the USAID-supported Nyae Nyae community conservancy had an increase in game populations from less than 2,000 in 1998, to more than 6,000 in 2004. Conservancy activities now account for 35 percent of members' cash income.

- The Greater Limpopo Transfrontier Park was formally established by agreement between the governments of Mozambique, South Africa, and Zimbabwe.

- In Malawi, USAID facilitated a revenue sharing scheme where protected area gate fees and tourism concessions are evenly divided between local communities and the Department of Parks and Wildlife.

- In Senegal, USAID helped 16 local governments develop local laws and conventions with 470 villages that will ultimately lead to the transfer of management responsibilities for more than 125,000 hectares of natural forest.



Countries in red have biodiversity activities funded by USAID country or regional programs in FY 2004. USAID's Africa portfolio covers sub-Saharan Africa, while northern Africa is described in the Asia and Near East chapter.

Madagascar

Biologically Diverse Forest Ecosystems Conserved

FY 2004 Obligation: $8.23 million (DA)

"Allow me to savor this unique moment: For once, Madagascar is among the world's richest countries… in biodiversity, of course!! Nature is a heritage. Our duty is to preserve it."

— Mark Ravalomanana, President of Madagascar at the opening of the international "Biodiversity: Science and Governance" conference in Paris, January 24, 2005.

More than 80 percent of the plants and 90 percent of the trees and animals of Madagascar are endemic to the island, and more than 90 percent of this biodiversity is found in the country's last remaining forests. Forest and biodiversity conservation are at the heart of USAID's Environment/Rural Development program in Madagascar, a biologically rich country ranked among the top three "biodiversity hotspots" in the world by the international conservation community. USAID's Forest and Biodiversity program focuses at the national and ecoregional levels to integrate multiple land uses into conservation planning and address landscape-level threats to biodiversity.

At the World Parks Conference in September 2003, the President of Madagascar committed to tripling the surface area of Madagascar's protected area network. In FY 2004, USAID supported prioritizing conservation sites based on biodiversity and economic importance, and creating new management standards for protected areas. In addition to the 1.7 million hectares already part of the protected area network, 7.7 million hectares were identified and delineated as critical zones for new conservation sites. In addition, in Fianarantsoa, the completion of the 227,139-hectare Ranomafana-Ivohibe Forest Corridor Management Plan is underway.

GREG OVERTON, USAID/MADAGASCAR

© WWF/CARA HONZAK

FOREST TUBERS SUSTAIN LIFE: In Madagascar's remote Spiny Forest region, two cyclones devastated all of this community's crops, forcing them to rely on forest roots like those this boy has collected. USAID's efforts will bring better health and economic opportunities while maintaining natural ecosystems that provide essential food in times of disaster.

USAID supported the creation of geo-referenced, prioritized biodiversity maps, which were given to the Mining and Forestry Commission. These maps led to a ministerial order for a four-year suspension of mining and logging permits in the 7.7 million hectares of potential conservation sites. Another ministerial order declared 12 million hectares of natural habitats as sensitive zones and therefore subject to full environmental impact assessments.

The management of protected areas also improved. USAID supported a review of national parks' thematic plans, conservation planning workbooks,

OPPOSITE PAGE – MADAGASCAR BAOBAB SWAMP: Baobabs shape a dramatic landscape in Madagascar, an island that is home to many plant and animal species found nowhere else on earth. Through an interaction of conservation, health, and agricultural activities, USAID is helping Madagascar achieve better resource management and move toward its ambitious goal of tripling the size of its protected areas.

DOREEN ROBINSON, USAID

COMMUNITY TREE PLANTING: A group of women sifts soil to be used in preparing a tree nursery. Reforesting degraded areas and planting trees around agricultural lands helps lift pressure from protected areas and provides easily accessible fuelwood and timber.

HITCHING A RIDE:
Lemurs are found only on Madagascar and the Comoro Islands. Of the 49 species of lemurs (two species new to science were just discovered in 2005), 17 are on the endangered species list. Habitat loss is the main threat to lemurs, as forest is cleared for agriculture.

IRG

rapid assessment and prioritization of protected area management materials, and a business plan template to strengthen the financial management of protected areas. In addition, plans are underway to update the Malagasy National Park Service conservation manual to address climate change and other far-reaching issues.

To manage and maintain forests and the protected area network efficiently, USAID's programs paid special attention to sustainable financing mechanisms, particularly carbon sequestration, debt swaps, and green taxes. Support was provided for the establishment of the Protected Areas and Biodiversity Trust Fund, including negotiations with potential donors.

In FY 2004, USAID helped natural resource users and the private sector promote investment and generate value from the sustainable use of biological resources and natural products. For example, the Agency developed linkages between 20 eco-enterprises and producer associations to improve market access for natural products. In another instance, ecotourism opportunities were reinforced between the National Parks Service and the private sector through the elaboration of an ecotourism policy and partnership agreement. Management plans were also developed for two pine plantations as a first step toward revitalizing the forest plantation industry.

USAID worked with the Government of Madagascar to help decision makers and key actors at the regional and communal levels embrace an ecoregional vision, primarily through a planning methodology that identifies complimentary conservation and development activities. Involved parties promoted the application of the Mise en Compatabilité avec l'Environnement (MECIE) Decree to make sure environmental issues were considered when economic investment decisions were made. With USAID assistance and advice, the National Office of the Environment reviewed 30 environmental impact assessments submitted by investors from different sectors, including agriculture, mining, and roads.

Finally, the program illustrated once again that farmers can increase production significantly and become responsible stewards of the environment by relating development interventions to conservation. At the regional- and field-levels, USAID's program tackled this challenge by linking community-based forestry to a farming systems approach, reinforcing rural associations, providing credit, improving water management, maintaining technical diffusion centers, and working with public and private actors to integrate the environmental dimension into planning and decision-making.

Partners: Malagasy Forest Service, Malagasy National Park Service, National Office of the Environment, Conservation International, World Wide Fund for Nature, Wildlife Conservation Society, International Resources Group

Box 2. A New Vision

Film and video are powerful communication tools. To publicize the President of Madagascar's commitment to dramatically expand the protected area system, a 15-minute film in English and Malagasy entitled "Madagascar: A New Vision" was produced.

The film production represents a collaborative effort between the Government of Madagascar (GOM) and USAID to highlight the President's vision, the unique nature of Madagascar's biodiversity, and community involvement in natural resources management.

The English version was shown in Washington, D.C. to the U.S. Congress' International Conservation Caucus in April 2004, and then in Madagascar on National Environment Day in June 2004. The film has been distributed extensively throughout the country and was shown by the Ministry of Environment and Forests to the Malagasy National Assembly and Senate in July. It serves as a key tool for the Ministry of Environment, Water and Forests, and USAID implementing partners for regional campaigns to communicate the process of the creation of conservation sites.

JIM DILLER CHEMONICS

African Regional Program

Office of Sustainable Development: Environmental Governance, Innovative Technologies, FRAME

FY 2004 Obligation: $1.408 million DA

The Office of Sustainable Development provided technical assistance, research, and program guidance for USAID's activities throughout sub-Saharan Africa, and stimulated region-wide improvements in policies and practices. An example of these activities is FRAME, a unique program that knits together the community of NRM experts throughout Africa to provide training, promote the exchange of NRM program best practices, and provide essential monitoring and evaluation to guide conservation programs across the region. The FRAME website can be found at: http://www.frameweb.org.

Other AFR/Sustainable Development -supported efforts were similarly ambitious and broad in their scope. For example, USAID worked with host governments and other development partners throughout sub-Saharan Africa to provide the enabling conditions for the sustainable management of the region's natural resources, the preservation of critical habitats and its wild flora and fauna. The issues addressed improvements to laws and practices that govern land tenure and property rights, thereby motivating communities to value and protect valuable habitat. In addition, these programs helped African governments establish and implement environmental laws and expand their capacity to conserve their national biodiversity in the face of economic development pressures.

Regional Center for Southern Africa

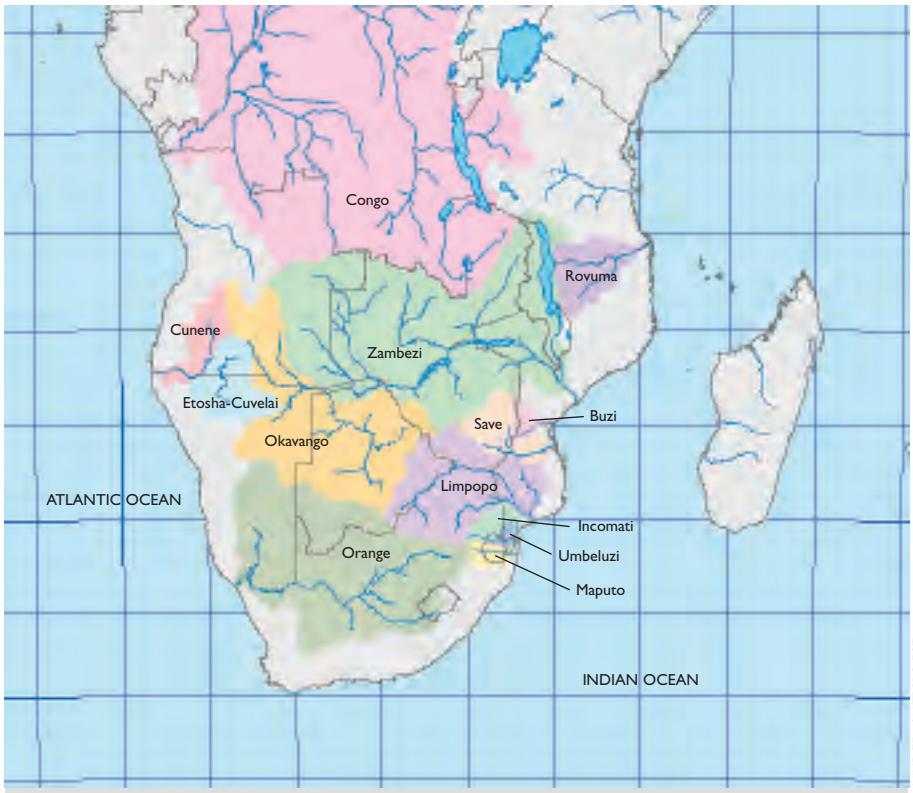
Improving the Management of Transboundary Natural Resource Areas and River Basins

FY 2004 Obligation: $1.5 million (DA)

The Regional Center for Southern Africa (RCSA) supports efforts to increase regional cooperation in the management of shared natural resources in southern Africa. FY 2004 was a transitional year for RCSA, as the Center successfully concluded work in three transboundary natural resources management areas in the region: the Great Limpopo Transboundary Natural Resources Management Area in South Africa, Mozambique, and Zimbabwe; Four Corners in Botswana, Namibia, Zambia, and Zimbabwe; and ZIMOZA in Zimbabwe, Mozambique, and Zambia. A strategic focus begun in FY 2004 will concentrate on improving management of selected international river basins in southern Africa by strengthening the capacity of relevant institutions to protect and manage river basin resources. Work will start in the Okavango River Basin in Angola, Botswana, and Namibia (see map).

USAID's support to transboundary natural resources management areas

Southern Africa River Basins



RIVER BASINS IN SOUTHERN AFRICA: Starting in 2004, USAID's Regional Center for Southern Africa began a new strategy focused on better management of key watersheds across national borders. The first basin chosen was the Okavango in the heart of southern Africa, a watershed blessed with high biodiversity.

in southern Africa helped to integrate government, technical, and community interests in the management of these critical conservation areas. In FY 2004, The Greater Limpopo activity completed joint management plans for two parks and initiated operational planning for the division of labor and revenues among participating nations. By the end of the program, the Greater Limpopo Transfrontier Park was formally established through an agreement between the governments of Mozambique, South Africa, and Zimbabwe.

In the Four Corners area in FY 2004, ten Conservation Business Ventures were supported, three wildlife corridors were identified and two of them were mapped, and management plans were developed for approximately 277,000 hectares associated with the conservation businesses. In the same region, a land-use management plan was completed for the Chobe Enclave Trust. The Four Corners area has recently received renewed interest from the Ministers of Tourism of the four nations (Botswana, Namibia, Zambia, and Zimbabwe), as well as Angola.

In FY 2004, the tri-national community forum of ZIMOZA (Zimbabwe, Mozambique, and Zambia) began to explore options for starting community-based natural resource enterprises. The ZIMOZA Transborder Initiative aims to improve the management of transboundary natural resources in Zumba District (Mozambique), Luangwa District (Zambia), and Guruve District (Zimbabwe) where the three countries meet and where the land is community managed rather than protected by the state. In all, this work led to more than 3.5 million hectares of transboundary areas under improved management through treaties and/or management plans and training supported by USAID.

RCSA's new strategy to support the improved management of selected international river basins was designed and funds obligated in FY 2004. Initial activities focus on the Okavango river basin. This basin comprises approximately 500,000 km^2 and includes the Okavango Delta, which is a Ramsar Convention wetland, and perhaps the most important protected area in Botswana. The Delta is recognized internationally as one of the most unique and pristine wetlands in the world. Surveys have shown that the Okavango delta supports 160,000-260,000 large mammals, 1,250 plant species, and 72 fish species.

ALAN HURDUS, USAID

OKAVANGO DELTA: This marsh lies in the middle of the desert, the ending point of the Okavango River that flows through Angola and Namibia before spreading out into a 15,000 km^2 seasonal delta in Botswana. USAID's "Sharing Waters" program is building management capacity for the entire river basin to ensure survival of the many unique species that rely on the river and marsh.

In the Okavango river basin, USAID's "Sharing Waters" program held three workshops on management of the river basin, created a public database, discussed draft legal and institutional analyses, and worked to build capacity within the three basin states of Angola, Botswana, and Namibia. A coalition of NGOs working on water issues involved entities from six countries. By supporting improved river basin management that incorporates environmental safeguards, USAID is helping to build the institutional capacity and encourage improved practices that will be essential for the protection of the delta ecosystem and biologically important areas within the broader area of influence of the basin.

Partners include: Development Alternatives Inc., African Wildlife Foundation, World Wildlife Fund, Natural Heritage Institute, and Associates in Rural Development Inc.

Central African Regional Program for the Environment/ Congo Basin Forest Partnership

FY 2004 Obligation: $16.0 million (DA)

Africa's vast Congo Basin, extending from the coast of the Atlantic Ocean in the west to the mountains of the Albertine Rift in the east, contains the world's second-largest dense and contiguous humid tropical forest, surpassed only by the Amazon

The Congo Basin

UNIVERSITY OF MARYLAND / NASA

CONGO BASIN: This map of the Congo Basin Forest shows dense forest in dark green and degraded forest or agricultural areas in light green. Grassland appears in pink and wooded savanna in violet. USAID conservation activities focus on the 11 landscapes outlined in white; these landscapes were identified by more than 160 regional and international experts as essential to preserving global biodiversity.

Basin. Conserving landscapes of this size is a high priority because fragmentation of natural ecosystems is one of the major threats to biodiversity.

On September 4, 2002, the United States joined the Congo Basin Forest Partnership (CBFP), an association of 29 international public and private partners working to support economic development, poverty alleviation, and improved governance through sustainable management of forest resources in Central Africa. This ambitious partnership was formed to help six Central African nations — Cameroon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, Gabon, and the Republic of Congo — achieve their goals of forest conservation and sustainable forest management across the Basin.

The Central African Regional Program for the Environment (CARPE) is the principal U.S. vehicle to administer the CBFP. CARPE is a 20-year regional initiative supported by USAID that meets the challenge of landscape-scale conservation in the Congo Basin by protecting 12 large tracts of relatively intact wilderness and other areas of unique ecological importance. The program works to maintain healthy populations of species such as elephants and large predators, while also conserving important, globally threatened species like mountain gorillas and bonobos (a great ape species). CARPE does this by building institutional and human resource capacity in the nine Central Africa countries of Burundi, Cameroon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Republic of the Congo, Rwanda, and São Tomé e Príncipe.

Eleven of the CARPE landscapes fall within the Congo Basin Forest Partnership area (see map page 14). These priority landscapes cover approximately 685,000 square kilometers in six countries. With an average area of 62,300 square kilometers each, the landscapes are of sufficient size to capture the large home and seasonal ranges of focal species such as forest elephants, hornbills, and giant tiger fish. Such areas maintain viable populations of wide-ranging and rare species. The landscapes are zones within which conservation should play a prominent role through various land use activities, such as protected core areas, connecting corridors, and buffer zones of biodiversity-compatible sustainable forestry management and community-based natural resources management.

CARPE is working in all these landscapes to develop landscape management plans that include wildlife management. Furthermore, CARPE works to build capacity for implementing those plans. In four landscapes, Memoranda of Understanding (MOU) to halt the bush meat trade were being negotiated with logging companies. In the Republic of the Congo, an MOU signed by the Government of Congo and a CARPE/CBFP implementing partner resulted in a government commitment to create a new protected area and work toward the creation of a Congo Wildlife Service. To date, CARPE

© CRAIG R. SHOLLEY/AWF

PRECARIOUS STATE OF MOUNTAIN GORILLAS: Only about 700 mountain gorillas remain in Rwanda, Uganda, and the Democratic Republic of the Congo, threatened by poaching and habitat destruction. Population growth is slow because a female usually has only 2-6 living offspring during a 50-year lifespan.

funds have attracted $27.4 million in matching funds for large-scale conservation from NGOs, international organizations, and the private sector. Finally, CARPE led the development of the "State of the Forest" report that informs policy and decision makers about biodiversity conservation progress in the field.

The 12th landscape that CARPE supports, Virunga, is located within the Albertine Rift surrounding Virunga National Park, a World Heritage Site within the Democratic Republic of the Congo and neighboring parks in Rwanda. As one of the most species-rich landscapes in Africa for vertebrates, Virunga is one of the most important areas for biodiversity conservation on Earth, owing to extraordinarily high levels of endemism. Perhaps most importantly, the region is home to the last 700 endangered mountain gorillas.

In partnership with NGOs, the European Union, the World Bank, and African institutions, CARPE has been working with protected area authorities to develop a coordinated plan for the Virunga landscape. Progress in FY 2004 includes protected area mapping, stakeholder consultations, material support to park authorities, and a program of joint international patrols. The partnership established a regional framework for collaboration toward transboundary natural resources management. A review of national and regional laws and policies relating to the conservation of great apes was completed and distributed to stakeholders for review and comment. Training provided to the Congolese Institute for Nature Conservation staff is helping to ensure protected area planning, monitoring, and conflict resolution. A plan for community ecotourism is underway to ensure that local communities benefit from conserving biodiversity.

Partners include: Congo region and donor governments, NGOs, and the private sector.

The Democratic Republic of the Congo

Protection of Biodiversity through Disarmament, Demobilization and Reintegration of Ex-Combatants

FY 2004 Obligation: $1.6 million (DA)

The Democratic Republic of the Congo (DRC), particularly the eastern part of the DRC (EDRC), is one of the most biodiverse places in the world. The EDRC contains the Kahuzi-Biega National Park in South Kivu Province, the Virunga National Park and the Ruwenzori mountains in North Kivu Province, and the Epulu Okapi Reserve and Garamba National Park in the Ituri district of Oriental Province. The Ituri district and North and South Kivu are also the most troublesome areas with respect to the peace process and the demilitarization of the country.

USAID focuses virtually all of its disarmament, demobilization, and reintegration efforts in the EDRC, primarily for political and humanitarian reasons, but also to protect the extraordinary biodiversity of the EDRC. Uncontrolled militia groups take refuge in these national parks for extended periods and destroy the flora and fauna of the region. USAID concentrates its disarmament, demobilization, and reintegration activities in an area adjacent to the Virunga National

BRUCE G. MARCOT, USFS

CONGO FLORA: Shining in the dark forest, these flowers are some of thousands of species protected through USAID interventions. USAID works with communities on sustainable harvesting of plants and plant products to generate income while maintaining viable wild plant populations.

USAID/GHANA

ECOTOURISM IN GHANA: This interpretive environmental display is part of a larger USAID program to develop a thriving ecotourism industry in Ghana. Attractive and informative ecotourism facilities will bring in additional revenue, an incentive for communities to protect wildlife and wildlife habitat.

Park. These activities encourage the local militias to disarm and demobilize and then provide reintegration assistance. USAID places reintegration sites away from biologically sensitive areas.

In 2004, more than 2,000 ex-combatants were reintegrated into society in locations sufficiently distant from the Virunga National Park. These efforts also served to reduce the overall lawlessness of the entire area, creating space for civilian administration and formal park protection. The reintegration complemented disarmament activities by the UN Peacekeeping Operation. The reduced number of arms in the area meant fewer weapons were available for poaching.

The Agency's Congo Livelihoods Improvement and Food Security (CLIFS) activity, implemented by partner Innovative Resources Management (IRM), also has clear biodiversity benefits. Many of the communities where CLIFS operates are riverine and depend partly or wholly on fishing for their livelihoods. Many others are in forested areas with highly diverse fauna. CLIFS development interventions are undertaken only after having been defined under IRM's Community Options Analysis and Investment Tool (COAIT) methodology in which conservation is a prominent objective. Each intervention is approved by local village development committees following a process by which there is assurance that the intervention and its benefits are thoroughly understood by them.

Over-exploitation of fishing resources is causing the near disappearance of certain species of fish on portions of the Congo River and its tributaries. Using COAIT, IRM works with local communities to design and implement programs to achieve sustainable resources use and maintain biodiversity. Interventions include moratoria on fishing to allow populations of species to reproduce, and regulation of fishing net mesh to allow egress of immature catch. IRM's experience with local fishermen is that conservation-related services are in high demand, since the fishermen are very concerned with the decline of certain valuable species in their catches.

IRM works with communities in heavily forested areas on the use of non-timber forest resources, particularly edible roots, fruits, and plants with medicinal value. As with over-exploitation of fish stock, plant species can be overexploited such that biodiversity is threatened. IRM provides local communities with sustainable harvesting methodologies, such as always leaving a minimal population of plants to naturally reproduce and maintain the species. The total population of villages benefiting from IRM interventions under CLIFS is approximately 100,000.

Partners include: Development Alternatives Inc., The International Foundation for Education and Self-Help, Innovative Resources Management.

Ghana

Community-Based Ecotourism Project

FY 2004 Obligation: $ 0.2 million (DA)

USAID promoted biodiversity conservation in Ghana through its Community-Based Ecotourism Project (CBEP). Tourism is the fourth largest foreign export earner in Ghana and, at its current rate of growth, is projected to become the largest foreign exchange earner for the national economy by 2007. By

promoting a conservation-friendly approach to tourism, CBEP can influence this critically important sector.

This project was a collaborative effort with the Nature Conservation Research Centre (the lead implementing agency for all activities at the individual project sites), Ghana Tourist Board, U.S. Peace Corps – Ghana, Netherlands Development Organization, and local communities. CBEP, which ended in FY 2004, aimed to develop environmentally and culturally significant sites in rural Ghana as tourism destinations, and to create income generating opportunities for rural communities that depend on conserving the local resource base and culture. These sites included monkey sanctuaries and important bird habitat. The project focused on three objectives:

- Improve basic ecotourism facilities and technical support at 14 sites
- Actively market the 14 ecotourism sites
- Improve human resource and institutional ecotourism capacity and affiliated services

To achieve these objectives, communities established tourism management teams (TMT) at each site. TMTs planned and implemented project activities to ensure that proposed developments recognized local cultures, beliefs, and needs. Peace Corps volunteers served as ecotourism development advisors in support of the TMTs. Improvements to ecotourism facilities included the construction of interpretive centers at all sites except the one that already had a center. Sites with functional visitor centers now have a central point from which to organize tourist services. Nature trails were also developed and improved at most sites, and wildlife viewing platforms were constructed at two sites. Hippo viewing shelters and summer huts were constructed at some sites as well.

To improve the financial transparency and accountability of tourism revenues at the site level and promote the financial sustainability of tourism-based enterprises, the project established a uniform receipt system. This system was adopted by all the sites in order to track and categorize types of tourism revenues. In addition, two visitor surveys were conducted to monitor visitor satisfaction and review pricing structures for all services provided at project sites.

The CBEP implementation team also produced a number of publications to build ecotourism capacity and market the projects sites including: a financial management training manual, customer service and guide training manuals, an ecotourism marketing plan, a visitor survey report, and a biological survey report. The project created a website to promote ecotourism in Ghana which can be found at: www.piwoweb.com/ncrc/home.html

By the close of the project in FY 2004, the 14 sites experienced significant increases in both revenue and visitor numbers as a direct result of the project interventions. Revenues reached 113 percent of the life-of-project target goal, and the life-of-project total paying visitor-days across all sites was 56,731 — substantially exceeding the original target of 20,000 visitor-days. These successes have increased interest in ecotourism and provided economic benefits from the preservation of biological resources. As a result, communities are now protecting wildlife. In addition, sanitation improvements at the parks have resulted in a cleaner natural environment.

Partners include: The Nature Conservation Research Centre, Ghana Tourist Board, U.S. Peace Corps, Netherlands Development Organization, and local communities.

Guinea

Increased Use of Sustainable Natural Resource Management Practices

FY 2004 Obligation: $3.8 million (DA)

The forests of Guinea belong to one of the biologically richest and most endangered terrestrial regions in the world. The Guinean forest ecosystem that extends from southern Guinea into Sierra Leone, through Liberia and southern Côte d'Ivoire, into Ghana and western Togo, is known as "Upper Guinea." Centuries of human activity have resulted in the loss of nearly 70 percent of the original forest cover of Upper Guinea. What remains is restricted to a number of isolated patches of exceptionally diverse ecological communities, comprised of distinctive flora and fauna. For example, the forests of Guinea's Pic de Fon forest in the Simandou Range host several threatened species including the Nimba otter shrew (*Micropotamogale lamottei*), West African chimpanzee (*Pan troglodytes verus*), and the Diana monkey (*Cercopithecus diana Diana*).

To conserve these endangered species and Guinea's other important natural resources, USAID continues to collaborate with partners to help small landholders adopt more profitable and less destructive natural resources management and agricultural practices. The program works to improve the natural resources management capacity of community-based organizations and establish a policy environment that empowers local populations to manage local resources and promote long-term investments in conserving Guinea's natural resources base.

USAID catalyzed and supported the Government of Guinea's adoption of a forest co-management approach that allows local communities to share the responsibilities and benefits of managing national forests. In FY 2004, the Agency helped place more than 117,000 hectares of forests and tree plantations under sustainable management by training more than 2,000 men and women from local NGOs and co-management groups in improved natural resource management techniques. This is an increase of 14 percent more than FY 2003. USAID's work to strengthen the capacity of community-based organizations in natural resources management planning will position them for eventual sustainable commercialization of natural resource products. In part because of these efforts, the national draft forestry code now recognizes the importance of co-managing forests.

USAID's global development alliance with Conservation International and the mining company Rio Tinto is a public-private partnership that extends the co-management approach to the forested region of eastern Guinea. Under this alliance, Rio Tinto's mineral exploration and potential mining activities will be accompanied by complementary local community development and forest conservation activities in targeted regions throughout the forests of Guinea. The parties in the alliance share the common goals of helping local communities and regional authorities effectively manage regional biodiversity and natural resources, and fostering sustainable economic development in the area.

PATRICK SMITH, USAID

COMMUNITY FORESTRY IN GUINEA: Once staked, these signs will help communities mark the lands they wish to manage for forests and wildlife. Chimpanzees use community forests in Guinea as temporary refuges and travel corridors between larger forests.

In FY 2004, USAID and its partners worked to expand protected habitat areas for chimpanzees in two classified forests and created a protected corridor on community lands bordering the Nyalama forest. Activities included mapping and coding specific plots of land that provide habitat for chimpanzees in these forests. In addition, a USAID-supported-program protects previously captured chimpanzees and works on their eventual release into the wild. The Agency developed a chimpanzee conservation and education program that will be implemented beginning in FY 2005.

USAID's effort to promote the sustainable management of Guinea's biodiverse forests also contributes to mitigating global climate change. In FY 2004, USAID funded an assessment of the carbon sequestration potential of Guinea's forests and the future economic and environmental impact of forest protection.

Partners include: Conservation International, Rio Tinto, Winrock International.

Kenya

Improved Natural Resource Management in Biodiversity Areas

FY 2004 Obligation: $2.917 million (DA)

USAID's biodiversity conservation program in Kenya works within and adjacent to national parks, reserves, and biologically important areas to improve sustainable use of the natural resources base. Activities are targeted at wildlife management, coastal management, and forestry/range rehabilitation.

The objective of the wildlife management program is to increase socioeconomic benefits to communities living adjacent to parks and reserves from conservation and sustainable management of wildlife and natural resources. Activities include promotion and capacity building of nature-based businesses such as community wildlife sanctuaries, ecolodges, and cultural centers. In addition, management of protected areas is enhanced through rhinoceros protection, ecological monitoring, reduction of human/wildlife conflicts, and support to Kenya Wildlife Service initiatives outside the protected areas.

A major achievement of the program to date has been an increased awareness of conservation and its importance to community livelihoods. With the support of USAID, communities and private landowners in conservation sanctuaries allocated more than 700,000 hectares of land across Kenya as wildlife habitat, buffer zones, and water catchment areas. In FY 2004 alone, Kenyan communities and landowners placed 44,945 hectares of land under improved management, almost 75 percent (33,647 hectares) of which were delineated exclusively for wildlife conservation. From this amount more than 1,000 hectares were newly brought to conservation through an easement program implemented under Kenya's ongoing conservation land lease initiative.

© WWF

SAFARI TOURISM: Kenya's national parks are internationally popular tourist destinations. USAID promotes nature-based businesses such as community wildlife sanctuaries, ecolodges, and cultural centers to protect Kenyan wildlife and increase benefits to communities living adjacent to parks and reserves.

In FY 2004, almost 50,000 individuals benefited from wildlife program-related activities, either by receiving funding, training, technical support, or increased incomes. USAID and its partners provided technical assistance to strengthen 31 enterprises. Community enterprises created 216 permanent and 354 casual jobs. Total combined earned wages for the year was $169,143. Community based organizations receiving support continued to show improved governance, management, and operating systems.

The Kenya Wildlife Working Group, a national forum representing seven regional groups and supported by USAID, provided critical input to the wildlife policy reform process. The group identified key policy issues, sponsored legislation, and lobbied parliament on the need for a more flexible wildlife policy in Kenya. A Wildlife Act amendment bill of 2004 was passed by the legislature but the president requested further stakeholder review prior to approval.

USAID's coastal management program implements projects at the local level to improve integrated coastal management practices and works at the national level to advance Kenya's marine policy. The

national level policy initiative focuses on raising the awareness of opinion leaders and key decision-makers in the government on the economic and ecological significance of the Kenyan coast as well as the need for coordinated management of this sector. Integrated coastal management work focuses on mangrove replanting, development of mooring buoys, rainwater harvesting, fish processing/ marketing, crab farming, coral cover surveys, fish counts, and institutional capacity building for community based organizations.

Significant progress was made in FY 2004 to improve community based organizational governance of marine resources. Steering committees were established for nine locally managed marine areas (LMMA) zones. USAID supported the formation, registration, and functioning of the Diani-Chale Management Trust that is responsible for the management of the Diani-Chale marine and coastal resources. A fully functioning Kenya Marine Forum was registered as a community trust responsible for advocacy on marine environment issues all along the Kenyan coast; it initiated a mangrove policy advocacy process and is providing leadership in the development of an Integrated Coastal Area Management policy.

USAID designed the Forest and Range Rehabilitation and Environmental Management Support Program to reverse forest and rangeland degradation, expand the use of sustainable forest-based enterprises, and empower constituencies to implement the Environmental Management and Coordination Act. The program works in tropical forests near Mt. Kenya that harbor endangered rhinoceros and bongos (a forest antelope). Activities also occur in the Mukogondo dry forest that provides dry season habitat for rangeland wildlife like Grevy's zebra that the project works to conserve in the surrounding Laikipia rangelands.

Finally, USAID supports conservation of the Arabuko Sokoke coastal forest which is rich in endemic bird species such as Sokoke owl, Sokoke Clarke's weaver and in threatened mammals such as Alder's duiker, and the golden rumped elephant shrew. Program activities include natural resources planning, flora and fauna inventory, reforestation of protected areas, rangeland reseeding, water points and ecotourism development, and forest products certification.

In FY 2004, 11,294 hectares of land were put under improved forest management, 25 community nurseries were established, and 100,000 tree seedlings were planted. A total of 237 forest guards were trained in basic forest management and conservation, and the draft Forest Policy of 2004 was finalized for presentation to the cabinet.

Partners include: African Wildlife Foundation, Kenya Wildlife Service, Pact Inc., Lewa Wildlife Conservancy, Forest Department, Coast Development Authority, Nature Kenya and National Museums of Kenya.

Liberia

The Liberia Forestry Initiative

FY 2004 Obligation: $1.1 million (2003 Supplemental)

The forests of Liberia constitute nearly half of the Upper Guinean

RENEE HUBBE @ ARTHOUSE 2002

SAPO NATIONAL PARK IN LIBERIA: The 700 square miles of Sapo National Park in south-eastern Liberia are home to leopards, forest elephants, pygmy hippos, and chimpanzees. Previously threatened by rebel fighters hiding in the park, the park's management will now improve with USAID support.

Forest Ecosystem, a threatened global hotspot for biodiversity that is home to many rare and endangered flora and fauna. Liberia's forests and wildlife traditionally provided diverse benefits to its people; however, under the regime of Charles Taylor, forests in Liberia were not managed sustainably or transparently, and revenues generated through commercial logging were used to fund armed conflict in the region.

The instability during the last several years of conflict, weakened forest governance, mass migration, and economic collapse, has placed unprecedented pressures on Liberia's forests and undermined the emphasis originally placed on conservation. For example, higher demand for bushmeat has accelerated the trade in wildlife, making many species populations more vulnerable.

The recent change of government in Liberia provides the National Transition Government of Liberia and its partners the opportunity to reform forest management throughout the nation. In early 2004, the U.S. Congress made $200 million available for reconstruction in Liberia. The U.S. State Department transferred to USAID $1.1 million of its $4 million allotment to support forest sector reform in Liberia. With these funds, the U.S. Government facilitated the formation of the Liberia Forest Initiative (LFI). The long-term goal of the LFI is to reform the forest sector in Liberia so its forests are managed sustainably and benefit all Liberians.

At the beginning of FY 2004, the Liberian Congress enacted legislation creating the Nimba Nature Reserve and authorizing the designation of a network of protected areas originally proposed in the 1980s. Liberia's sole national park, Sapo, was established in 1983, but during the last two years the Liberian Forest Development Authority has been unable to exercise even minimal control over Sapo, and park infrastructure has been destroyed. Likewise, the Forest Development Authority has had no resources to begin developing Nimba or any new protected areas.

The peace agreement and USAID support for reconstruction offer an opportunity to reverse this deterioration by creating a strong and comprehensive protected area network. In April 2004, a multi-agency team performed an initial assessment of the Liberian forest sector rehabilitation and reform needs to bring it in accordance with international agreements and standards.

The Action Plan resulting from the April 2004 assessment proposed the following next steps:

1. Help Sapo Park staff, key local partners, and local community leaders and members to establish effective management at Sapo National Park, including facilities construction.
2. Support the Liberian Government in establishing management at the newly created Nimba Nature Reserve, including facilities construction.
3. Facilitate an open and inclusive process with the Forest Development Authority and local partners to improve forest conservation and institutional management.
4. Build support and commitment to conserve existing protected areas and expand the protected area network.

Partners include: The USDA Forest Service, Conservation International, the Center for International Forestry Research, and the Environmental Law Institute.

Malawi

Increased Sustainable Use, Conservation, and Management of Natural Resources

FY 2004 Obligation: $2.90 million (DA)

USAID is helping conserve Malawi's biodiversity through programs focused on improved policy development and community-based natural resources management. More than 85 percent of the Malawian population relies directly on rural incomes for their livelihood. USAID's Community Partnerships for Sustainable Resource Management in Malawi program (COMPASS) assists communities and households to increase revenues earned by participating in community-based natural resources management. Phase I of COMPASS went from 1999 to 2004. COMPASS II continues the same approach, adding additional emphasis on watersheds, rivers, protected areas, and high value natural products.

In FY 2004, with USAID assistance, the number of communities adopting community-based natural resources management practices in target districts grew to 642, representing a seven percent increase from FY 2003. Communities adopted practices and sustainable income generating activities, such as wildlife management, natural forest

management, beekeeping, fish farming, and herbal production. The net immediate benefits to communities from improved natural resources management activities reached $279,000. Many of these communities are in areas adjacent to national parks, like Liwonde National Park, Lengwe National Park, Nyika National Park, and Vwaza Game Reserve.

USAID also facilitated the implementation of co-management agreements between the Department of National Parks and Wildlife and communities living around the Liwonde National Park, Lake Malawi National Park, and Mwabvi Game Reserve. An agreement was reached to adopt a revenue sharing scheme in which tourism concessions and gate collections are evenly divided between communities and the Department of Parks and Wildlife for management of these protected areas. This revenue sharing scheme will be applied to all protected areas in Malawi.

Finally, a new Global Development Alliance in FY 2004 with Washington State University supports community-based management of the Lake Malawi Chia Lagoon Watershed. The 1,000 km^2 watershed is degraded from deforestation and soil erosion, resulting in declining fish stocks and biodiversity loss. The decline of fishing and farming has caused a spike in poaching and illegal logging, and the local population of 55,000 has become more dependent on external assistance. This new GDA alliance will identify and encourage sustainable uses for the watershed's natural resources, flora, fauna, and land. Local communities within Chia Lagoon

USAID/MALAWI

CASTING A NET: Living on the shores of Lake Malawi, one of the largest lakes in Africa, Malawians depend on fish for much of their protein. USAID's work with these communities, such as with the 55,000 residents of the 1000 km^2 Chia Lagoon Watershed in Central Malawi, will help stem declining fish populations through community management.

will be given more responsibility, power, and resources to manage their natural assets.

Partners include: Development Alternatives Inc, Kadale Consultants Ltd, Spectrum Media, Mulanje Mountain Conservation Trust, ACI Africa, Washington State University, Cooperation for the Development of Emerging Countries, Business Consult Africa, Wildlife and Environmental Society of Malawi, Agricane Malawi Limited and Nkhotakota District Assembly.

Mozambique

Biodiversity Conservation Program

FY 2004 Obligation: $1.0 million (DA)

Mozambique's biodiversity activities seek to conserve and protect forests, coastal areas, and threatened wild species through support to community-managed conservation areas; support for alternative livelihoods, promotion of sustainable forest management, and cultivation of wild crop species; and development of ecotourism.

The Limpopo Heartland conservation program, supported by USAID with implementation by Africa Wildlife Federation, promotes the protection of terrestrial ecosystems in and around existing national parks in southern Mozambique. The project supports the establishment of the Cubo community nature reserve, which is adjacent to Kruger National Park, and the Limpopo National Park in South Africa that will result in the protection of more than 50,000 hectares of savannah and dry woodland.

The Heartland program will also add to the protection of a large area of wetland by supporting communities and the Government of Mozambique in the redevelopment and management of Banhine National Park. Finally, Africa Wildlife Federation will perform a feasibility study to establish a nature conservancy in the estuarine and marine coastal zone near the effluence of the Save River.

In addition to working in national parks, USAID helps develop sustainable forestry, alternative livelihoods, and domesticated production of wild natives to reduce threats to biodiversity. Working with the local Ministry of Agriculture in Alto Molucue, USAID partner World Vision is trying to propagate African Potato, a wild plant native to southern Africa that is being over-collected from the wild because of its ability to alleviate some of the symptoms of HIV/AIDS. Domesticated production should reduce and prevent damage to natural habitat in the woodlands and forests of Zambezia Province that occurs when people harvest wild African Potato.

In the same area, World Vision and Food for the Hungry International promoted alternatives to slash-and-burn agricultural practices, such as beekeeping within forest areas, and trained local fire brigades to

SUZANNE POLAND

SWEET SELLING: This farmer stands proud as he shows off the honey he produced. In Mozambique, USAID promotes improved beekeeping through beehives in lieu of fires to smoke out bees from forest trees. Sales of honey also improve livelihoods and reduce the need for slash-and-burn agriculture, which threatens natural woodlands.

prevent fires caused by slash-and-burn agriculture. In FY 2004, $18,000 was generated from the sale of honey. The programs also helped villagers find non-lethal ways to deal with crop-damaging wildlife, such as monkeys, thus alleviating human-wildlife conflict.

Finally, USAID designed a new tourism program during FY 2004, now implemented by the World Wildlife Fund. The stated goals of the program include the conservation of both terrestrial and aquatic ecosystems, upon which tourism in Mozambique depends. The design included an examination of the options for conservation activities in northern Mozambique.

The tourism program will include the establishment of the Lake Niassa Reserve, which will protect a fragile and unique ecosystem including a portion of the lake and the surrounding shoreline. The tourism program will also include the creation of the Pemba Bay Conservancy, which will help protect and manage development within and around Pemba Bay. These activities will address threats to biodiversity like illegal logging and hunting, lack of area management in terrestrial ecosystems, and illegal fishing and unplanned development in aquatic ecosystems.

Partners include: Ministry of Agriculture, Africa Wildlife Federation, World Vision, Food for the Hungry International, Cubo Community, World Wildlife Fund.

© WWF-NAMIBIA

NAMIBIA FLAMINGOS: Etosha National Park is Namibia's premier game park, covering more than 22,000 square kilometers. The park is dominated by a massive mineral pan which fills temporarily when the rains are heavy, attracting thousands of wading birds including flocks of flamingos.

Namibia

Promoting Communal Conservancies for Improved Livelihoods and Conservation

FY 2004 Obligation: $2.731 million (DA)

USAID and its partners in Namibia support the establishment and development of communal conservancies so that indigenous peoples can better manage their lands and conserve wildlife in order to promote economic gain and preserve their heritage. Because of Namibia`s progressive legislation, communal conservancies have the authority to manage wildlife in their respective areas and the right to retain the income from sustainable use of these resources. The establishment of conservancies has increased local responsibility and ownership over wildlife and other natural resources, allowed members to benefit financially from wildlife management, and has served as a base for a politically active civil society.

During FY 2004, the program focus expanded beyond wildlife to include the increased communal management of and benefit from broader types of natural resources, including veldt products, rangelands, historical and cultural resources, and water resources. This expansion in scope precipitated needed policy reform discussions to redefine roles, responsibilities, and authorities for the numerous local stakeholders engaged in natural resources management and use.

The program contributed to a number of biodiversity impacts, including increasing the range of some key species such as elephant, increasing wildlife numbers including elephant and black rhinoceros, and maintaining broad-leafed woodland savannah in north-eastern Namibia. In the case of the Nyae Nyae conservancy of the north-east, game populations have increased from less than 2,000 in 1998, to more than 6,000 in 2004. Nyae Nyae is the oldest registered conservancy in Namibia, having gained its rights over use and

benefits in 1998. The greatest increases occurred in kudu, oryx (the world's largest and most graceful antelope), and blue wildebeest populations, while the increase in the number of disease-free buffalo has been exceptional.

In FY 2004, two more conservancies were registered, bringing the total to 31. These conservancies protect approximately 7.8 million hectares or 24 percent of communal land. By the end of FY 2004, an additional 40 conservancies were in various stages of preparation for registration. Activities in the conservancy areas in FY 2004 have generated $2.35 million in new income from community enterprises, joint venture tourism, thatching grass sales, trophy hunting, live game sales and donations, and craft sales. Almost 100,000 individuals have received financial and other benefits from these activities, and USAID and its partners have trained 1,805 people in FY 2004 alone.

A few of the more successful conservancies were developed and registered by the Himba of the north-west and the Ju/'hoansi San of the north-east (Nyae Nyae), two of Namibia's indigenous peoples. In the Nyae Nyae conservancy, CBNRM activities now account for 35 percent of cash income for conservancy members and 28 percent of employment. The diversity of income sources is a major strength of the program. The Torra Conservancy, the first to become totally self-sufficient, is plowing its profits back into the community, and another three conservancies have reached financial self-sufficiency.

Economic and political empowerment is another major benefit of this program. Previously marginalized, isolated peoples now have increasing control over their futures. They are able to have an impact on public policy at regional and national levels of government and negotiate favorable business

© WWF-NAMIBIA

NAMIBIA COMMUNITY CONSERVANCIES: Beautiful scenes like these result from successful game management by Namibian communal conservancies. With USAID support, tourism income has increased, wildlife numbers have skyrocketed, and previously marginalized peoples are now having impacts on public policy at regional and national levels of government.

arrangements with the private sector. They have improved managerial and business skills which are transferable to other endeavors.

USAID plans to build on these results in Namibia through its five-year "LIFE Plus" activity, which began in mid-2004. The CBNRM focus was expanded to add conservancy oversight to a broader set of natural resources, such as forests, fisheries, and grazing land, in addition to wildlife. The range of benefits will be broadened through more enterprise development, expanded community-based tourism, and further strengthened civil society.

"As a result [of the program], the stocks of game are large, sustainable, and able to provide the Nyae Nyae population with an annual benefit. Members were very pleased to receive a cash benefit as it represents a significant addition to their income. This shows the advantages to our members of living in a conservancy that makes good use of its assets." — Lara Diez, acting Director of the Nyae Nyae Development Foundation.

Partners include: World Wildlife Fund, Namibian Nature Foundation, the Namibian Ministry of Environment and Tourism.

Nigeria

Sustainable Agriculture and Natural Resources Management in Cross River State

FY 2004 Obligation: $1.178 million (DA)

In March 2004, USAID launched a new forestry/biodiversity program in Nigeria called, "Sustainable Practices in Agriculture for Critical Environments" (SPACE). SPACE aims to improve and diversify livelihoods in selected communities within and adjacent to priority critical environments in Cross River State. It also will work to maintain the ecological processes and ecological values in priority critical environments in Cross River State. The SPACE approach integrates three key themes:

- Community-based Natural Resource Management — strengthening community-level forest management institutions and relationships
- Protected Area Management — strengthening the enabling environment for stakeholders to actively participate in biodiversity conservation
- Sustainable Agriculture — improving productivity and quality of selected agricultural and non-timber forest products (NTFPs), strengthening producer groups, and enhancing value-chain management

The program design is based on the premise that without effective natural resources governance at the community level, strengthening market relationships will only lead to increased pressure on primary forestlands and biodiversity. Thus, two of the program's three modules were developed to help ensure that the activities of the sustainable agriculture and non-timber forest products module do not increase the clearing of forest. The project plans to develop sustainable governance and management models for community forests, and promote policies that will enable local stakeholders to actively participate in biodiversity conservation.

COCOA TRAINING IN NIGERIA: At the Cocoa Farmer Field School, extension agents and farmers learn improved land management and production methodologies. By improving productivity and sustainability of existing cocoa farms, USAID will reduce pressure to convert new forest land to cocoa.

A comprehensive project design was approved in July 2004. During the design phase, several stakeholders' consultations were held with rural communities surrounding protected areas, non-governmental organizations active in conservation, and state and federal governmental agencies involved in forestry and national park management. Supporting analyses and stakeholder assessments were conducted, including an assessment of the capacities of partners and implementing organizations and their training needs and resources. Significant differences exist in the level of awareness regarding biodiversity and the importance of natural resource management among the communities in the project area.

SPACE selected seven communities for pilot activities, all of which are near government-designated protected areas and natural forest areas that contain gorillas and other wildlife. SPACE will work with these communities to develop sustainable approaches to agroforestry (especially cocoa) and other forest products that will reduce the incentive for further expansion into critical habitats.

SPACE will also help the communities develop land use management plans and community forestry management activities. Land use plans will include agreements that limit agricultural expansion into forested areas. The planning process will include biodiversity conservation and protected area management.

Through community land use plans, SPACE will emphasize the preservation of primary forest and sustainable harvesting of natural resources on community lands, with a focus on non-timber forest products. One specific intervention will be the formalization of legal status of 85 square kilometers of tropical rain forest, including significant primary forest primate habitat, under Nigeria's first community conservancy, supported by a management plan and a land use plan for the surrounding buffer area.

SPACE is building on the experience and trust developed through community-level efforts to engage leaders and stakeholders at multiple levels to learn from these experiences and replicate the most successful innovations and models. The design applies the principles identified in the USAID publication "Nature, Wealth, and Power" and draws heavily on adaptive management and learning approaches for conservation and natural resource management where stakeholder interests are complex and often conflictive. Monitoring activities will ensure that SPACE-supported pilot efforts do no harm to the environment and will build capacity to continue enforcing mitigation principles and rules within communities and beyond the areas of SPACE's direct impact.

Partners include: Associates in Rural Development Inc., Wildlife Conservation Society, Development in Nigeria, Grassroots Development Organization, Cross River State Forestry Commission, Cross River National Park.

Senegal

Improving Natural Resources Management Policy and Practice

FY 2004 Obligation: $1.0 million (DA)

USAID's natural resources management program seeks to improve lives and protect resources in southeastern Senegal by promoting conservation, poverty reduction and good governance. The program is known locally as "Wula Nafaa" ("benefits from the bush"). It supports the cultivation and processing of non-traditional agricultural products like cashews, sesame, fonio (a local cereal grain), hibiscus, and mango. It also supports the sustainable use and marketing of natural products like baobab fruit, bamboo, and shea butter.

In FY 2004, the Wula Nafaa program helped develop baobab fruit into a new export market. Local partners exported 140 tons of baobab fruit to Europe for use in the cosmetic and natural medicine industries. This represented a $200,000 market for the first year, generating $82,000 in profits for 115 local beneficiaries. USAID's promotion of joint ventures between local communities (producer groups, women's groups, and family run businesses) and the private sector led 123 producer groups to successfully negotiate commercial contracts.

Wula Nafaa promotes sustainable community management of the natural forests from which many of these products are harvested. Southeastern Senegal was chosen as the project site because it is one of the last forested areas in the country. The area is under threat

AARON BROWNELL, USAID

SENEGAL NON-TIMBER FOREST PRODUCTS: Sap from the keraya gum tree *(Sterculia setigera)* is extracted and exported for medicinal uses and sold in Senegal as a food additive. Developing sustainable harvesting of products from existing native forests will provide incentives to conserve those forests.

from agricultural encroachment, an unsustainable charcoal production system, poorly regulated hunting, and increased mining activities. It is also under threat because traditional forestry practices and institutions have excluded local communities. Wula Nafaa is designed to conserve biodiversity by reducing pressures on the forest ecosystems.

USAID works with local government officials to help them implement a decentralization law that transfers resource management responsibility to local communities, as well as requiring communities to develop and enforce a management plan for the forest. In FY 2004, the Agency helped 16 local governments develop local laws and conventions with 470 villages that will ultimately lead to the transfer of management responsibilities for 128,685 hectares of natural forest. The program also provided training to increase the productivity and regeneration of resources coming from these forests.

USAID is working closely with the Government of Senegal to make sure that the decentralization code is being implemented correctly, allowing local communities to benefit financially from natural forest products. This is essential because it provides an economic incentive for sustainable biodiversity management.

Prior to the decentralization law, the Government of Senegal leased the hunting rights for about 2.5 million hectares of community land, mostly forested, to the private sector. Local communities were disenfranchised and had no incentive to manage these local forests. In FY 2004, USAID's program analyzed hunting in

Senegal and proposed policy changes. As a result of this, the government modified hunting policies to make them more responsive to the local communities' right to manage their resources.

USAID also worked with local governments to ensure that herders are properly integrated into local forest management decisions. The Agency conducted a study of the existing patchwork of pasture related legal code and determined how those codes could support community pasture management. The program then began extension activities to tell herders and communities about their rights. With USAID's help, the Government of Senegal is now drafting a comprehensive pasture code.

USAID also supported a small marine conservation activity, which promoted better management of the coastal wild shrimp fishery by getting fishermen to agree upon open and closed fishing seasons. The shrimp are given enough time to reproduce and grow to a larger size, thereby increasing profits. This activity also benefits biodiversity as it occurs within and near to the Sine-Saloum Delta Biosphere Reserve, a Ramsar site, in which shrimp are important ecosystem components.

Partners include: Senegal Ministry of Environment and Nature Protection, regional councils of Tambacounda and Kolda, International Resources Group, PA Group, Winrock, Cooperative League of the United States of America, The World Conservation Union, U.S. Geological Survey, and the U.S.D.A. Forest Service.

Tanzania

Improved Conservation of Coastal Resources and Wildlife

FY 2004 Obligation: $2.895 million (DA) and $300,000 (ESF)

USAID works to stem the loss of biodiversity in Tanzania by improving natural resources management in three target areas: the Tarangire-Lake Manyara ecosystem, the Ugalla ecosystem, and the coastal ecosystem. The Agency also works to improve natural resources management across the nation by supporting beneficial environmental policies and legislation at the national level. This approach links biodiversity conservation with economic opportunities in wildlife and coastal resources management by promoting economically sustainable, decentralized decision-making.

Box 3. Community Management Achieves Economic and Environmental Security in Tanzania

Omari Bakari Magoya, a local village leader, strides purposefully across a field covered with long grasses that flow right to the shore of nearby Lake Burungi. Omari's village, Mwada, has stood in this same place for well over one hundred years. Until recently, subsistence farmers, charcoal makers, and animal herders had overtaken the area, stripping it of its resources and slowly turning it into a desolate no-man's land. Now, with USAID assistance, the land's ecosystem health is being restored.

First, villagers were trained in land management and patrolling methods, business management, gender issues, and contract negotiations. Then, an agreement was brokered between a local safari company, Kibo Safaris, and the village. The village maintains a portion of its land as wildlife habitat, enforcing a ban on domestic grazing, cultivation, human settlement, and tree-cutting. By enforcing this ban, they allowed the land to recover and encouraged wildlife to return. The presence of wildlife will increase tourist interest, and Kibo Safari now has a tourist-ready tented camp on village land. A conservation fee is paid to the village regardless of tourism levels and additional, tourist-based fees go into a village-managed fund. These fees support community projects, such as a health clinic and maternity ward. In addition, villagers are employed as game scouts, patrolling the land to ensure its security.

Today, just one short year after the agreement was signed, the impact of the program is visible. Natural vegetation has returned and wildlife has comfortably reestablished itself. A Mwada women's group has sustainably harvested natural foods and handicraft materials, increasing their household incomes while improving their families' nutrition.

By showing communities how they benefit from conserving their lands, USAID-sponsored programs not only help increase conservation areas and habitats for Tanzania's wildlife, but also work to improve the well being of Tanzania's people.

USAID's support for community-based conservation programs encourages communities to conserve wildlife habitats by showing them how they benefit from sustainable use of wildlife resources. The program is helping communities establish locally-managed wildlife management areas in 16 pilot locations. Community-based conservation approaches in the Tarangire-Lake Manyara and Ugalla ecosystems have been particularly successful, receiving $75,000 in benefits through private-sector partnerships, up from $58,000 in 2003.

In total, an additional 620,000 hectares were placed under conservation management in FY 2004, increasing the total area managed for biodiversity conservation to more than 2 million hectares since the beginning of the program in 1997. Of this total, approximately 1.1 million hectares are under "strict" conservation management for wildlife, forestry and natural resources management. Wildlife revenues, which also continued to rise during the year despite travel warnings, increased by 3.3 percent in FY 2004 to $3.2 million. Environmental education initiatives expanded to seven new districts during the year, reaching an additional 350,000 people.

On the policy front, this year was a turning point with the Parliament's approval of the Environmental Management Act of 2004, developed in a partnership with government, the private sector, and NGOs. With the President of Tanzania's assent, this legislation will enable rural communities to manage and financially benefit from the natural resources under their village tenure.

© WWF

HEALTHY HUMANS AND CONSERVATION IN TANZANIA: Child healthcare is a key aspect of the Population, Equity, AIDS, and Coastal Ecosystems (PEACE) project. By addressing issues like the AIDS epidemic, rapidly growing coastal populations, and gender, USAID is working to resolve some of the underlying causes of poor natural resource and biodiversity management.

USAID's Washington-based Biodiversity Team supports a cross-sector program for Tanzania's National Integrated Coastal Management Strategy, which provides for greater participation by districts and villages in integrated coastal management and conservation of coastal and marine resources. District fisheries, forestry, and mangrove officers began regular patrols to enforce laws and regulations on natural resources use under the guidance and support of the Tanzania Coastal Management Partnership. The partnership is a joint initiative between USAID, Tanzania's National Environment Management Council, and the

University of Rhode Island Coastal Resources Center.

Through this initiative, district fisheries officers in FY 2004 successfully apprehended individuals smuggling 206 sacks of mangrove charcoal, equivalent to more than 3,200 mangrove trees valued at more than $1,000. Technical assistance from this program has also converted abandoned salt pans into productive and socioeconomically important areas.

Tanzania's coastal ecosystems, including coral reefs and mangrove forests, are threatened by human overexploitation. To achieve the goals of biodiversity conservation, sustainable use of coastal resources, and enhanced quality of life of coastal people, the project addresses cross-sectoral issues such as rapidly expanding coastal populations, a large number of HIV-positive men, women, and children, and a lack of equity for segments of the population, especially women. The Population, Equity, AIDS, and Coastal Ecosystems (PEACE) project takes a more holistic approach to coastal biodiversity conservation by integrating the crosscutting themes of HIV/AIDS, population, and gender.

In FY 2004, PEACE trained 40 community-based distribution agents in leadership, basic paramedics, HIV/AIDS, and family planning. The agents reached 23 village communities within the target areas, providing modern health and reproductive services through designated dispensaries, rural health centers and village maternity clinics. Lessons have been assessed and documented, broader policy implications determined, and recommendations made concerning changes in strategies for implementing marine conservation initiatives as well as public health programs.

Partners include: Academy for Environmental Education, Africare, African Wildlife Foundation, Institute for Environmental Innovation, Jane Goodall Institute, University of Rhode Island/Coastal Resources Center, and World Wildlife Fund.

DEVELOPMENT ALTERNATIVES INC.

UPWARD FORECAST FOR GORILLAS: Munching on leaves, this gorilla may have a brighter future. Although highly endangered, monitoring work sponsored by USAID in FY 2004 indicated that mountain gorilla populations are the highest registered since the 1960s.

Uganda

Conservation of Critical Habitats and Species in a Landscape Context

FY 2004 Obligation: $4.402 million (DA)

The mountain forests of southwest Uganda and neighboring countries contain some of the most ecologically rich tropical forests on the planet. Western Uganda lies within the heart of the Greater Virunga Landscape along the northern border of the Albertine Rift. This landscape contains more vertebrate species than any other landscape of contiguous protected area in Africa. In addition to serving as home to the critically endangered mountain gorilla, these forests harbor a vast array of important species and provide environmental services like water and traditional medicines to surrounding human communities.

USAID has supported natural resources management and biodiversity activities in Western Uganda for the past 15 years. The Agency has contributed to the conservation of biodiversity by supporting improved protected area management in the southern tip of the Greater Virunga Landscape, including the montane forests. In Uganda, these forests harbor more than one-half of the world's population of the critically endangered mountain gorilla.

During FY 2004, the Agency worked to reduce threats to the gorilla population and habitat, strengthen gorilla park management, and develop economic alternatives for the communities that inhabit the park buffer zones. FY 2004 monitoring results indicate that mountain gorilla populations are the highest since those registered in the 1960s. Another conservation achievement is maintaining a constant population of the Grauer's rush warbler population, a highly endangered swamp indicator species. There were no reported fires, and water quality in the park's rivers and swamps has remained high.

USAID also supports the sustainable financing of Uganda's protected areas, and works to ensure that communities near parks share in the benefits of conservation. Mountain gorilla tourism represents an important annual economic activity for Uganda, with an estimated $16.9 million in benefits annually. Because of a revenue sharing policy, which the Agency helped shape, surrounding communities now share in 20 percent of all gate receipts. For example, during FY 2004, a steady increase in revenue to Buhoma Community Campground at Bwindi Impenetrable National Park led to an increase in funds disbursed to the community for projects.

In FY 2004, the Uganda Wildlife Authority (UWA) increased the gorilla trekking permit to $360, leading to total collections of $1,783,093, a 16 percent increase over the previous year. In FY 2004, gorilla park revenue represented 44 percent of the total amount of self-generated revenue and 20 percent of total operational costs for all of UWA. USAID's partners successfully lobbied for a $9 per permit benefit to the local communities on top of the 20 percent of all gate receipts the communities currently receive.

USAID continued to work with Ugandan NGOs, district level entities, governmental and quasi-governmental organizations, international private voluntary organizations, and other groups committed to conserving Uganda's biodiversity and enhancing the social and economic welfare of its people. In FY 2004, 52 organizations have received grants for biodiversity conservation projects, which included 12,992 people trained in HIV/AIDS and natural resources management.

In the central and northern segments of the Greater Virunga Landscape, buffer zone agroforestry activities provided an income source and improved agricultural production for communities living adjacent to protected areas. Close to 150,000 trees were planted on farms for fuel wood and soil conservation near protected areas, and more than 3,200 farmers began practicing improved technologies such as zero grazing, agroforestry, and soil and water conservation. USAID also funded implementation of 14 projects to address issues that arose from District Environmental Action Plans and funded specific aspects of the Queen Elizabeth Protected Area (QEPA) Management Plan. In all, 233,370 hectares of forests and protected areas are under improved management.

Partners include: African Wildlife Foundation/International Gorilla Conservation Programme, Uganda Wildlife Authority, Africare, Development Alternatives Incorporated, Ecotrust, and World Agroforestry Center.

Zambia

Community-Based Natural Resource Management and Sustainable Agriculture

FY 2004 Obligation: $1.30 million (DA)

USAID works in natural resource management and sustainable agriculture with the goals of improving livelihoods and reducing pressure on natural ecosystems in Zambia.

USAID's natural resources management program operates in Mulobezi, Sichifulo, and Bbilili Game Management Areas on the southern border of Kafue National Park in southern Zambia. The goals of this four-year program, scheduled to end in early FY 2006, are to improve the welfare of people living in the project area, and to ensure the sustainability of natural resources for future generations.

The program works to increase the capacity of civil society to participate in the policy making process by supporting the implementation of a bottom-up approach to resource management within the Zambia Wildlife Authority, and strengthening the capacity of civil society for policy analysis and advocacy.

USAID helped communities provide input into policy formation by facilitating a community presentation to a parliamentary committee on forestry, as well as provide input into the draft land policy review process. The Agency also supported Zambia Wildlife Authority's reorientation to support grassroots natural resources management. Numerous meetings between the Authority, communities, and safari operators helped improve community relations, increase skills in resource management, and implement safari hunting concession agreements. Many successful community mobilization and sensitization campaigns for conservation were also organized.

USAID supported the formation of Community Resource Boards (CRB), as well as regional boards around national parks, and a national association of regional CRBs. The CRBs are going through a process of legal ratification and

DARYL & SHARNA BALFOUR

ZAMBIAN SAFARI CONCESSIONS: In Zambia, USAID supports game management areas on the southern border of Kafue National Park in southern Zambia. Safari concessions are bringing increased tourism revenues to local communities, providing incentives for them to protect surrounding natural areas.

nearly all have created natural resources management plans and by-laws.

The program also addresses transboundary natural resources management by increasing the number of tourists to Kafue National Park and expanding the benefits of cross-border trade to rural groups in Zambia. Initiatives include promoting community goods and services in regional markets, negotiating community collaboration with ecotourism operators, and organizing exchange visits for community residents with CBNRM programs in Botswana, Namibia, and Zimbabwe.
For example, the community in the Sichifulo area registered the Dundumwezi Camp Site in FY 2003 to be run by their CRB as an ecotourism business venture. Construction of the camp site has reached an advanced stage, and the community has taken ownership of the process. This venture is expected to encourage conservation activities as the community sees tourism revenues improve their livelihoods.

USAID's agricultural programs in Zambia, working with smallholder farmers in the Central, Copperbelt, and North-Western Provinces, also contribute to biodiversity conservation goals. Maize, soy bean, and paprika farmers were trained in conservation farming methods that promote minimum land disturbance, reduce the use of external chemical inputs, and discourage burning of remnant crop stalks. Through these techniques, soil quality was enhanced, and farmland diversity was increased. These techniques allow increased productivity of smallholder farmers on small plots and reduce the need to clear large expanses of surrounding open forest for agricultural production. In FY 2004, approximately 10,000 smallholder farmers in Zambia adopted conservation farming methods through USAID support.

Finally, wild honey farmers in the Miombo forests of the North-Western Province, who have used forest burning in the past to chase away bees prior to honey harvesting, were provided training and modern tools. They now sustainably produce, harvest, and properly handle certified organic honey for export to the European Union, and soon to the Middle East and the United States. In FY 2004, USAID worked with 3,000 honey producers who adopted improved honey harvesting methods. In this way, large expanses of Miombo woodland were protected from burning instead of being burned, as in prior years.

Partners include: Africa Wildlife Foundation, CARE, Wildlife Conservation Society, and the Zambia Wildlife Authority. Development Alternatives Incorporated and Cooperative League of the USA.

ASIA AND THE NEAR EAST

The Asia and the Near East region is perhaps the most biologically diverse region of the earth. Home to the world's highest mountain system, a vast rainforest complex, and two-thirds of the world's coral reefs, an estimated 80 percent of the world's endangered species live in the region.

Unfortunately, the region has lost 95 percent of its forests, as well as 70 to 90 percent of its original wildlife habitats. Increasing pressures are being placed on natural resources due to corruption, population growth, urbanization and industrialization, and a growing demand for energy and raw materials. Inappropriate environmental policies and weak institutions have also proven to be impediments to improved environmental governance.
In recognition of the important role of natural resources and biodiversity in Asia and the Near East, USAID supported biodiversity conservation activities in more than 15 countries in the region, accounting for more than $31 million in funding in FY 2004.

Significant FY 2004 Conservation Achievements:

- In Iraq, USAID began restoration of the Mesopotamian marshlands.

- In Bangladesh, USAID helped put nearly 20,000 hectares of floodplain under sustainable management, leading to increased fish species diversity and numbers.

- In Egypt, USAID helped the Government of Egypt finalize important policy reforms that impact biodiversity in the Red Sea, including the adoption of a conservation management plan for the Wade Gemal Protected Area.

- In Indonesia, USAID gained broad stakeholder agreement to protect an additional 305,000 hectares of forest in East Kalimantan, home to more than 2,000 wild orangutans.

- In the Philippines, USAID supported two ground-breaking studies that will inform environmental management in the Philippines for years to come: "In Turbulent Seas: The Status of Philippine Marine Fisheries" and "Mapping Population-Biodiversity Connections in the Philippines."

This map shows countries in red in Asia and the Near East where there were significant biodiversity activities funded by USAID country or regional programs in FY 2004.

Iraq

Restoring Iraq's Mesopotamian Marshes

FY 2004 Obligation: $4.0 million (IRRF)

"The source of life is water. Without water, life is dead ... So you can imagine our feelings when the water came back."

— Hassan, a marsh Arab quoted in the *San Francisco Chronicle*, Dec. 28, 2003

The marshlands of southern Iraq, located largely between the Tigris and Euphrates rivers, constitute the largest wetland ecosystem in the Middle East. World Wildlife Fund includes the marshlands in its Global 200, which ranks the Earth's most biologically outstanding habitats. The marshlands are also of considerable socioeconomic value, providing a unique way of life to its inhabitants, known as the Marsh Arabs, who have lived there for 5,000 years.

In the early 1990s, Saddam Hussein's regime began draining the marshes with dams and dikes in an effort to force out the Marsh Arabs. The destruction of the marshlands was a major environmental and humanitarian disaster in Iraq. In early October 2003, Iraqi engineers reopened the dikes and dismantled some of the dams, allowing the life-giving waters to once again rise over the recently arid land.

DOUG POOL, USAID

MARSH ARABS: The marshes of Iraq represent a unique ecosystem and support a 5,000 year-old civilization. USAID is helping to reflood parts of the wetlands and encouraging regeneration of fish stocks.

PETER REISS

BUILDING WETLAND MANAGEMENT CAPACITY: Iraqi Ministry of Water Resources staff learn how to measure water salinity, an essential task for assessing the ability of a wetland to regenerate. USAID works closely with government agencies to build the staff capacity they need for long-term resource management.

USAID's Iraq Marshland Restoration Program began implementation in early FY 2004 and is helping to revive these ancient wetlands and their traditional villages by balancing technical water-related issues with socioeconomic development goals, such as providing income and employment opportunities. The program also seeks to build management capacity within counterpart agencies of the Government of Iraq.

A USAID-funded assessment team interviewed former marsh dwellers, tribal sheikhs, community leaders, farmers, fishermen, and female herders across the region. The assessment, summarized in the February 2005 edition of the journal *Science*, concluded that the marshlands can be partially restored, reviving a once thriving ecosystem, and once again offering employment and livelihood opportunities.

WATER BUFFALO: The marshlands provide critical habitat for globally significant wildlife such as migrating birds, as well as domesticated animals. Livestock such as water buffalo provide marsh dwellers with essentials such as meat, milk, butter, and hides.

DOUG POOL, USAID

Before the marshes were drained, the marsh economy depended on agriculture, livestock, birding, mat making, and fishing. Although fishing was a primary economic livelihood for only a few low-status tribes, subsistence fishing was practiced widely, and fish was a major food staple. USAID's Marshlands program aims to rehabilitate fish stocks to allow these practices to resume. Fish production increases will be achieved by re-flooding the largest possible area and by keeping sluices open within flood control and agricultural constraints to maintain fish migration and spawning. Fishery diversity and productivity will take years to return, but there are encouraging signs that it can recover.

With USAID's support, progress is being made at the national and local levels. National-level activities include developing a reservoir simulation model of the Tigris-Euphrates river basins, re-equipping the looted soil and water laboratories at the Ministry of Water Resources and the University of Basra, installing stream gauges and training in their use, and organizing international study tours and short courses for ministry engineers and marsh dwellers.

Box 4. The Marshes of Southern Iraq

Not long ago, the lush marshes of southern Iraq teemed with wildlife and supported a unique 5,000 year old culture practiced by half a million indigenous people, the "Ma'dan," or Marsh Arabs. This desert oasis was so productive and fertile that some believed it to be the site of the Garden of Eden.

Located at the confluence of four rivers, Iraq's southern marshes were once an 8,000 square-mile wetland that was the permanent habitat for millions of birds and a flyway for millions more migrating between Siberia and Africa. Coastal fisheries in the Persian Gulf used the marshlands for spawning migrations. The marshlands also served as a natural filter for waste and other pollutants in the Tigris and Euphrates rivers, protecting the Persian Gulf.

In retaliation for the Shia uprising in southern Iraq against his regime, Saddam Hussein ordered the systematic destruction of this ecosystem, once famous for its biodiversity and cultural richness. From 1991 to 1997, the marshes were drained by the construction of massive manmade rivers and canals that diverted water into huge evaporation ponds and into the Shatt al-Arab river. By 2001, only seven percent of the original marshlands remained. The only relatively intact marsh that remained was the northern portion of al-Hawizeh, straddling the Iran-Iraq border. The al-Hammar and Central marshes to the west were totally desiccated, transformed into salt-encrusted desert.

This environmental disaster has been compared in scale to the drying up of the Aral Sea in Central Asia and the deforestation of the Amazon Basin. The few Marsh Arabs who remained in the area were largely displaced, persecuted, and suffered great economic loss. USAID's Iraq Marshland Restoration Program is helping to reverse these environmental and humanitarian atrocities.

IRG

PETER REISS

NATURE'S BOUNTY: Processing her milk harvest, this Marsh Arab's livelihood has been improved through marsh restoration that brought back important habitat for wildlife and for her buffalo. USAID further reinforces environmentally-friendly income opportunities through business development and livestock management training.

Marshland-level activities include improving agriculture and livestock production systems, extending primary health care facilities, restocking native fish, and designing community-level constructed wetlands to manage sewage and improve water quality. This approach also recognizes the limitations imposed by available water and the importance of achieving ecological, environmental, and human equilibrium. Healthy restored marshland ecosystems support biodiversity, improve environmental quality, and generate goods and services such as pollution control, fishing and grazing, as well as reed harvesting for fodder and mat-making.

By March 2004, nearly 20 percent of the original area had been re-flooded. Native plant species are becoming established in some of these areas. Current estimates indicate that as many as 150,000 to 200,000 people are now living in the marsh areas — a much larger number than originally expected.

Partners include: The Iraqi Ministry of Water Resources is the lead Iraqi agency in cooperation with the Ministries of the Environment, Agriculture, Public Works, and Health, the Colleges of Agriculture and Marine Science Center, and the University of Basra. USAID's effort is led by Development Alternatives, Inc. including collaborating partners from Duke University Wetlands Center, the U.S. Army Corps of Engineers, the Iraq Foundation, and AMAR Charitable Trust.

ANE Regional Programs

ANE Support Team and Central Programs

FY 2004 Obligation $0.62 million (DA)

The ANE regional program provides technical support to USAID missions as they plan, implement, and evaluate their biodiversity activities. This includes conducting host country biodiversity analyses, assisting in strategic planning, and visiting field sites to provide expert advice. The Bureau staff also provide biodiversity-related inputs into Agency budget and planning processes. The ANE regional bureau is catalyzing analysis and actions directed at two key issues that threaten biodiversity in the region: forest conflict and over-exploitation of biodiversity for income.

The Managing Conflict in Asian Forest Communities activity supports missions in designing approaches to reduce conflict over forest resources and build alliances among those who can influence this reduction. This is critical because conflict over forest resources occurs in 11 of ANE's 27 countries. Assistance was provided to missions in Indonesia, the Philippines, Sri Lanka, and Cambodia. In the Philippines, a national-level workshop attended by government, NGO, and indigenous organizations developed next steps to mitigate conflict, such as establishment of conflict mitigation units and harmonization of natural resource laws that had exacerbated conflict. In Cambodia, a national-level analysis of the degree of conflict led to land-use planning with communities to gain their rights to forests and lands.

LORI SEVERENS

CAMBODIA COMMUNITY MAPPING: Debating openly, a community maps out its current and desired future land uses. Participatory processes like these encourage community members to become empowered citizens and to adopt long-term conservation practices in their land management.

The activity Environmental Support to Raise Rural Incomes explores novel ways to raise rural incomes while accomplishing biodiversity conservation goals. In FY 2004, technical assistance was provided to missions in Nepal and the Philippines to analyze the feasibility of transfers of payments to communities for environmental management. The resulting publication was produced and distributed widely to partners and to ANE mission and Washington USAID staff. The analysis laid the groundwork for the development of public-private sector alliances and further technical assistance to Cambodia and Vietnam.

EAPEI: East Asia and Pacific Environmental Initiative

FY 2004 Obligation $1.2 million (ESF) plus $0.4 million (DA) from GDA Secretariat

Active since 1998, EAPEI addresses critical environmental challenges and opportunities in forest, coastal, and marine resources management. EAPEI complements other U.S. Government investment in the region by supporting transboundary, cross-border, and regional activities and institutions and by supporting activities in USAID non-presence countries. Although FY 2004 was the last year of USAID funding for EAPEI, environmental initiatives in the East Asia and Pacific region will continue under the purview of the Department of State, Bureau of East Asia and Pacific Affairs.

In FY 2004 EAPEI made a grant of $500,000 (Economic Support Funds) to NGO partner WildAid, supplemented by $400,000 (Development Assistance) from the

Global Development Alliance Secretariat, as part of a global development alliance to reduce trade in illegal or unsustainably harvested wildlife and timber in Thailand and Cambodia. The objectives were to (1) counter wildlife trafficking in Cambodia through a public hotline, wildlife rescues, and care of confiscated wildlife; (2) strengthen national park protection in Thailand and Cambodia through development of training curriculums and manuals and capacity building of trainers; and (3) conduct awareness campaigns in Thailand and Cambodia through television advertisements and billboards.

Through the WildAid Alliance, there have been major successes in curbing the illegal wildlife trade in Cambodia. Special law enforcement teams stopped illegal wildlife traders through inspections in restaurants, markets, traditional medicine shops, and on roads and at national borders. By December 2003, consumption of wildlife in restaurants had been reduced by 95 percent compared to consumption in 2000. During FY 2004, there were 5,043 live wildlife seizures, 3,973 dead animals confiscated, $4,890 in fines collected, and 335 traders apprehended. However, it remains a major challenge to stop the tens of thousands of live animals and tons of animal parts that continue to leave the country every month for China.

Another EAPEI grant of $500,000 (ESF) was made to CounterPart International to support the *Coral Gardens Initiative*, a community-based program in Fiji that provides support and expertise to help communities conserve, manage, and restore the coral reef resources on which they rely. The project is a unique public-private alliance that enables traditional resource-owning communities to partner with private-sector tourist resorts to bring about the recovery of shared coral reefs and coastal marine resources.

The Coral Gardens Initiative is based on the establishment of no-take marine protected areas as part of community-based resource management plans, plus the implementation of various coral reef conservation and restoration program activities. Such hands-on activities as replanting corals and mangroves stimulate the involvement of local communities and resorts, increasing awareness and support for conservation, and accelerating recovery of coral reef ecosystems and marine resources. Sustainable income generating incentives in the areas of ecotourism and sustainable community-based coral farming are promoted in the conservation plans, providing an alternative income and further enhancing public-private collaboration in conserving and restoring coral reefs. FY 2004 activities consolidated lessons learned in Cuvu, and expanded the work to additional sites in Fiji, focusing on the areas where resort tourism is rapidly expanding, potentially representing a threat to reef health: the Mamanuca Islands, the Yasawa Islands, the Savusavu area of Vanua Levu, and the Taveuni and Ra areas.

Partners include: CounterPart International and WildAid.

Afghanistan

Conservation of Biologically Important Areas

FY 2004 Obligation $3.13 million (DA)

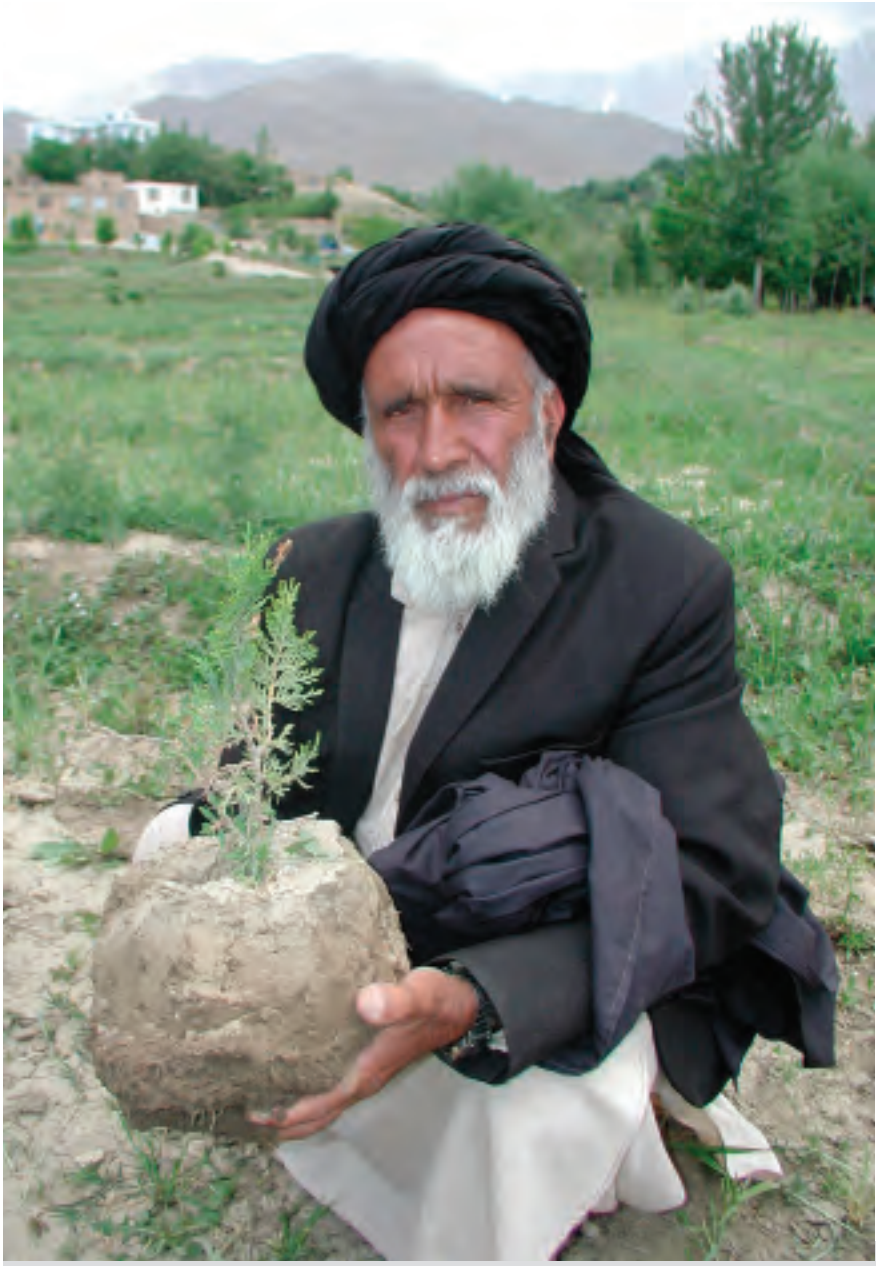
Afghanistan's terrestrial and aquatic habitats support a broad spectrum

USAID/AFGHANISTAN

AFGHANISTAN PISTACHIO WOODLANDS: Partially damaged during many years of war, Afghanistan's natural pistachio woodlands will be rehabilitated through a program of replanting and soil conservation.

of biodiversity including areas of global significance such as the Wakhan Corridor. The biological and ecological values of all these areas have suffered from civil conflict, war, environmental degradation, and drought.

USAID's biodiversity conservation activities in Afghanistan are implemented through the Afghanistan Conservation Corps (ACC) with the goals of protecting biologically important areas and fostering propagation of native tree species. The ACC has initiated projects in eight of Afghanistan's 16 terrestrial ecoregions. ACC rehabilitates and conserves natural resources using community labor as a complement to the Afghanistan government's employment program. Activities include the construction of check dams, small water reservoirs, hillside ditching and planting of trees along riverbanks to prevent soil erosion and rehabilitate watersheds, and collection of seeds of Afghan tree species for propagation.



USAID/AFGHANISTAN

AFGHANI FORESTER: This government forester proudly shows a seedling in his nursery that will help recover native conifer forests. Planting will be accomplished by the Afghanistan Conservation Corps, which provides a valuable workforce to help implement the Government of Afghanistan's plans for ecosystem restoration.

USAID's biodiversity program in Afghanistan was initiated at the end of FY 2004 and continues to develop as consultations with stakeholders identify opportunities for USAID assistance. Hence, the majority of activities funded in FY 2004 will be initiated in FY 2005.

The program will target rehabilitation of 300 to 500 hectares of natural pistachio woodlands in the provinces of Samangan, Badghris, Takhar, Faryab, Mazar e Sharif, and Heart. This will not only restore a unique biodiversity area, it will also help rebuild the Afghan economy by complementing another USAID program intended to develop domestic and international markets for pistachios. The project will also reforest areas of the Eastern conifer belt in the provinces of Kunar, Nuristan, Laghman, Nangarhar, Paktia, and Paktika.

Finally, the ACC will rehabilitate protected areas like the Kole-Hashmat-Khan Waterfowl Sanctuary and Band-e-Amir National Park as well as assess conservation opportunities in the Wakhan Corridor. On the basis of these assessments, additional activities may be directed at biologically important habitats within the Wakhan corridor.

Partners include: Afghanistan Conservation Corps, Afghan

Ministry of Irrigation, Water Resources and Environment, the Ministry of Agriculture and Animal Husbandry, and the U.S. Department of Agriculture.

Bangladesh

Improved Management of Open Water and Tropical Forest Resources

FY 2004 Obligation $2.5 million (DA)

USAID's environment program concentrates on protecting and enhancing the status of Bangladesh's remaining critical wetland and tropical forest resources and biodiversity. The Agency supports a co-management approach that increases community participation in resource management while strengthening government oversight capacity. Currently, two field activities are being implemented under the Management of Aquatic Ecosystems through Community Husbandry (MACH II) program, which focuses on wetland conservation, and the Nishorgo Support Project, which conserves protected tropical forest areas. In addition, assistance is being provided to help establish the Arannayk Foundation (Bangladesh Tropical Forest Conservation Foundation), which was authorized under the Tropical Forest Conservation Act (TFCA).

The MACH project has shown significant success in fisheries and wetland recovery. By the end of FY 2004, 19,686 hectares of floodplain were under sustainable management; 534,746 trees were planted to rehabilitate wetland, riparian, and upland habitats; and 72 permanent fish sanctuaries were established. Perennial standing water reappeared during the dry season in areas where little or none had been present for years. USAID-supported interventions also successfully reintroduced 28 species of native fish and 47 species of native plants. More than 348,000 people attended USAID-funded environmental education and outreach activities in the past five years. In FY 2004, MACH II was successful in helping communities acquire 12 new, ten-year leases (as opposed to normal two-year commercial leases), with a total area of 459 hectares. These leases are for large areas that can now be restored to an enhanced state of productivity and generate long-term fish production benefits for thousands of people.

NASIM AZIZ, NISHORGO SUPPORT PROJECT, IRG

BANGLADESH PROTECTED AREAS: A group of Islamic religious leaders gets a tour of Lawachara National Park from local tour guides trained with USAID support. Building a broad-based constituency for conservation is essential to the success of the Bangladesh government's Nishorgo protected area program.

MACH also takes pressure off the natural resources by increasing the assets and livelihood options of the poor, particularly during periods of stress. Efforts to make up for lost income because of self-imposed and self-regulated fishing restrictions resulted in the formation of 245 community credit groups with 4,960 members. Together, the members of these credit groups have accessed almost $1 million in microloans for alternative income generating activities. They have also accumulated personal savings in excess of $100,000. These activities, combined with training, credit, and other services, enabled the poorest families to increase their incomes by 47 percent.

The second phase of the wetlands management activity shifted focus to refining, institutionalizing, and expanding the co-management model to be taken up by the wider government of Bangladesh and donor community. Partners in 140 local sites around the country have

adopted USAID best practices in sustainable wetlands management, and in FY 2004 the Government of Bangladesh's Local Government Engineering Department moved to adopt these practices in several sub-districts.

For the Nishorgo Support Project, establishing the policy climate for long-term improvements in protected area management has been an important focus of attention. The Government of Bangladesh's Forest Department, with USAID encouragement, established a national, broad-based protected area management program called Nishorgo, which means "idyllic nature" in Bangladeshi. In February 2004, the program was officially launched in a highly publicized event by the Minister of the Environment and the U.S. Ambassador. The project team has been advising the Forest Department as it revises the Wildlife (Preservation) Act, which will provide the formal foundation for development of a protected area management system in the country.

The five initial pilot sites under the Nishorgo Support Project include the landscapes around the Lawachara National Park (Moulavibazar District), the Rema-Kalenga Wildlife Sanctuary (Habiganj District), the proposed Satchuri National Park (Habiganj District), the Chunati Wildlife Sanctuary (Chittagong District), and the Teknaf Game Reserve (Cox's Bazar District). A sixth pilot site will be added prior to the end of year three of implementation. FY 2005 activities will focus on controlling illegal logging, setting up park co-management committees, and conducting forest restoration. The ultimate goal will be to show viable examples of terrestrial co-management that can be replicated across the country in a national protected area system.

Partners include: Arannayk Foundation, Ministries of Water, Environment & Forests, Winrock International, IRG, Caritas, Bangladesh Center for Advanced Studies, Center for Natural Resource Studies, Community Development Center, Nature Conservation Movement, Rangpur Dinajpur Rural Service, and Radisson Hotel.

Cambodia

Sustainable Management of Natural Resources and Biodiversity

FY 2004 Obligation $0.694 (ESF)

USAID in Cambodia works with its partners to protect and manage Cambodia's natural resources and environment, along with promoting good governance to provide responsible and accountable stewardship in all sectors. USAID's existing projects work throughout the country but with particular emphasis on activities in Koh Kong, Mondolkiri, Ratanakiri, Battambang, Siem Reap, and several other provinces.

USAID supports the Community Forestry Alliance for Cambodia (CFAC), a public-private partnership that is contributing to the development of community

WWF - R. MCLELLAN

CAMBODIA'S DRY FORESTS: Mondulkiri Protected Forest in eastern Cambodia supports globally threatened species such as tiger, Asian elephant, and clouded leopard. USAID programs led to dramatic reductions in poaching of wildlife in Cambodia.

forestry systems in Cambodia through improvement and implementation of national policies and field programs. CFAC channels flexible funding to innovative Cambodian NGOs that are engaged in community forestry policy development, extension and training, and field project implementation. CFAC also facilitated exchanges between policy makers, donors, NGOs, local government, and rural communities.

With USAID support, in FY 2004 national community forestry guidelines were approved and communicated through nationwide radio, print media, and training programs. These programs were given legitimacy by the landmark government approval of the Community Forestry Sub-Decree in October 2003. Community forestry agreements covering 50,000 hectares of forestland and involving 20 communities were approved. Community forestry training occurred in 83 villages, benefiting more than 9,000 families. Community forestry activities help to protect natural forests that harbor much of Cambodia's biodiversity.

USAID/Cambodia together with USAID's Global Development Alliance Secretariat supported a public-private alliance led by the NGO WildAid. The alliance promotes community agriculture development and fighting of illegal trafficking of forest and wildlife products. In FY 2004, alternative livelihood opportunities were developed by Wild Aid for more than 180 families formerly dependent on destructive and unsustainable use of the forest to survive. In addition, 55 forest rangers were trained to protect the wildlife sanctuary in the Cardamom Mountains region. Finally, during the last 3 years, the alliance has persuaded 90 percent of Phnom Penh's restaurants to stop serving wildlife and has rescued more than 17,000 wild animals from illegal traders.

Partners include: WildAid, Community Forestry International, Inc., Ministry of Agriculture, Forestry and Fisheries, and Ministry of Environment.

Egypt

Egyptian Environmental Policy Program

FY 2004 Obligation $1.5 million ESF

USAID completed the Egyptian Environmental Policy Program (EEPP) in FY 2004, which supported economic growth and biodiversity conservation in the Red Sea Governorate. The program provided technical assistance and training to protect and manage the natural and cultural assets that are essential for the growth of the tourism industry on the Red Sea. In FY 2004, EEPP finalized important policy reforms that impact biodiversity in the Red Sea. These reforms enhanced the management and conservation of the Red Sea coral reefs, islands, and linked marine and terrestrial ecosystems in the Northern and Southern Sectors. Approved policy reforms included the adoption by the Government of Egypt's relevant authorities of an ecologically sensitive tourism development zoning plan and a conservation management plan for the Wade Gemal Protected Area (total area: 5,450 km^2). EEPP also

MIKE COLBY USAID

CLOWN FISH, EGYPT: Immune to the stings of anemone, this clown fish enjoys a safe hideout. Because of its relative isolation and widely varying depths, the Red Sea also contains many unique species that USAID seeks to conserve through its support to Egypt's national marine park system.

helped the relevant Egyptian government entities develop a revenue generation mechanism for the Northern and Southern Sectors of the Red Sea. This system will assist the government in financing environmental protection in the area. EEPP worked with the Government of Egypt and local NGOs to establish a mooring buoy strategy and an implementation plan for one of the largest mooring buoys programs in the world (more than 750 buoys in FY 2004). The mooring buoy program plays an important role in protecting coral reefs and related ecosystems from the damages caused by boat anchors. EEPP has also helped the Government of Egypt establish a decentralized environmental management unit at the Red Sea Governorate level, which will boost the Governorate's environmental management capability.

Toward the end of FY 2004, the Agency awarded a technical assistance contract for a new environmental program in the Red Sea: Livelihood and Income from the Environment (LIFE). The LIFE program is designed to further promote natural and cultural-based tourism in Egypt and to continue supporting conservation management in the Red Sea with a focus on the Southern Sector of the Red Sea. The program also aims to develop natural and cultural business enterprises and services for the Red Sea region, create jobs for local residents to enhance Red Sea Governorate visitor and resident experiences, enhance provision of services to meet basic needs and expand livelihoods of local and indigenous Red Sea communities, and improve protection and sustainable use of Red Sea Governorate resources.

THE NATURE CONSERVANCY — SEACMPA

INDONESIA SEASCAPE: Raja Ampat in Papua, eastern Indonesia, is a large area of reefs and islands, containing significant terrestrial plant and animal diversity.

Partners include: Red Sea Governorate, Egyptian Environmental Affairs Agency, and Tourism Development Authority.

Indonesia

Strengthened and Decentralized Natural Resources Management

FY 2004 Obligation $8.5 million (DA)

USAID's Natural Resources Management program worked to improve the local management of Indonesia's forests and coastal zones. The program ended in

© BURT JONES & MAURINE SHIMLOCK, SECRET SEA VISIONS, INC.

HEART OF THE CORAL TRIANGLE: More than 450 species of hard coral thrive in the Raja Ampat Islands of Indonesia, confirming that it has the world's highest coral biodiversity. USAID partner Conservation International recorded 283 species of fish in a single 90 minute dive, a world record.

October 2004 and emphasized conserving forests and biodiversity in national parks and other protected areas, and increasing benefits to local communities. In FY 2004, USAID supported the implementation of 79 site-specific co-management plans, placing approximately 2.2 million hectares of coastline and forest under improved management.

USAID's Orangutan Habitat Protection program has garnered broad-based support from local villages, governments, and forest concessionaries resulting in the protection of an additional 305,000 hectares of prime orangutan habitat in Berau, East Kalimantan which is home to more than 2,000 wild orangutans. In Tanjung Putting National Park in Central Kalimantan, USAID's implementing partners have expanded community-based patrolling to cover more than 30 percent or 124,800 hectares of the park's most critically important habitat for more than 2,500 wild orangutan.

With support from USAID, Berau planners elected to protect many priority sites identified by The Nature Conservancy's (TNC) Ecoregional Conservation Assessment (ECA), which for the first time allowed the spatial planning process to take into account wide public consultation. Berau's new 10-year spatial plan incorporates 80 percent of ECA priority sites into protected or production forest status. An additional 305,000 hectares (753,700 acres) of land has been classified as protected forest or protected area in the current spatial plan. In total, 24 percent of the Berau District is now classified as protected forest.

A formal decree has recently been signed by the Regent of Berau recognizing the 12,228-hectare (30,220 acres) Lesan River Forest Habitat as a locally recognized protected area and orangutan refuge. This decree prohibits any development activities, including conversion and logging, in the area. The local government will focus revenue from taxes onto the area in order to increase its prospects for long-term protection. The next challenge will be in formally managing the area in partnership with the local government, local communities, and Mulawarman University, the premier forestry university in East Kalimantan.

The Regent of Berau also issued a decree for the establishment of Berau Marine Conservation Area

and identified its outer boundaries, including a total marine and coastal area of 1.2 million hectares, including mangrove habitats along the shore line, small islands, and seaward from the shorelines to four nautical miles, which is the limit of regency maritime jurisdiction law.

In North Sulawesi, Bunaken National Marine Park has reached full financial sustainability. The active local community participation in co-managing the park by patrolling and adhering to zoning agreements has resulted in re-growth of hard coral from less than 35 percent in 1997 to an average of 60 percent in 2004. Similar results have been documented in coastal communities outside the marine park with USAID-assisted villages creating their own marine protected areas. Coral cover has increased from 20 percent in 1997 to more than 50 percent in 2004, and fish abundance has increased 15-fold in these areas.

USAID supported a multi-disciplinary assessment for Mamberamo Basin in Papua in which university, government forestry agencies, and local NGOs determined conservation priorities.

USAID's mission in Indonesia, along with the Global Development Alliance Secretariat, also assisted several alliances to promote sustainable timber certification and control of illegal logging. Working together with major retailers like IKEA, Indonesian Forest Companies like Sumalindo, and investment firms like Goldman Sachs, the alliances promoted a timber-marking tracking system and sought to limit foreign investment that might be supporting illegal logging activities. For more information on this highly successful, innovative alliance, see the GDA description (page 96).

Partners include: World Wildlife Fund-Indonesia, Conservation International, The Nature Conservancy, Academy for Educational Development, World Agroforestry Center, International Resources Group, Orangutan Foundation International, U.S. Department of the Interior - Office of Surface Mining, and World Education.

Nepal

Natural Resources Governance and Biodiversity Conservation

FY 2004 Obligation $1.420 million DA

USAID's environment program supports efforts to improve natural resource governance and biodiversity conservation in Nepal by improving the democratic functioning and management capacity of community-based natural resources management groups. The program supports activities to strengthen the capacity of approximately 600 community forestry and buffer zone user groups. These activities contribute to the conservation of biodiversity by conserving important forest habitat, flora, and fauna.

In FY 2004, approximately 600 forestry and buffer zone management user groups placed close to 11,438 hectares of forest under improved management and harvested 13,554 metric tons of forest products in a sustainable manner. More than 420,000 people benefited from training and workshops on natural resources management, non-timber forest

PATRICK SMITH, USAID

NEPALESE COMMUNITY FOREST: Pausing to sharpen her sickle on a stone, this woman prepares to collect grass fodder from a nearby forest.

Community forests in Nepal protect biodiverse natural ecosystems while meeting basic needs and creating income from forest products.

products management and marketing, integrated conservation and development in buffer zones, preparation of buffer zone management plans, leadership and institutional development, advocacy, and financial management.

USAID community forestry activities occurred in four districts: Banke, Bardia, Kailali, and Dhading. Community-based resource management was also supported in Shey-Phoksundo National Park and the Royal Bardia National Park. USAID's implementing partners CARE and WWF worked with the Department of National Parks and Wildlife in these two national parks to improve participatory national park and buffer zone management.

Community forestry user groups initiated advocacy campaigns to establish user rights and make their executive committees and local government agencies more transparent. Public hearings and public auditing — keys to transparency and accountability — were conducted by 44 groups, and 255 groups conducted financial audits of their accounts. These activities resulted in more transparent use of group funds and recovery of $4,550 misused by group executive committee members. This effort contributed to a lessening of local corruption.

In addition to improving the governance of natural resources, USAID promotes sustainable forest enterprises to help increase household income and improve food security. By helping farmers and community-based organizations produce and market high-value crops such as coffee, and non-timber forest products, such as wintergreen oil, the program is expected to increase incomes of the rural poor by at least 50 percent and bring the target population of 40,000 households above the poverty line by 2006. The development of sustainable natural resources-based enterprises is expected to improve livelihoods while reducing pressures on other natural resources of conservation importance.

Because of USAID assistance, the forest and high-value agricultural products sold by project beneficiaries have increased to $3.69 million, exceeding the target of $2.5 million. A total of 15,694 households, covered to date by the activity, sold vegetables worth $2.2 million. Thus, the targeted rural households increased their income on average by $140, an increase of more than 50 percent in household income.

Partners include: Ministry of Forest and Soil Conservation, Department of National Parks and Wildlife Conservation, Ministry of Agriculture and Cooperatives, CARE, World Wildlife Fund, and International Development Enterprise.

Philippines

Improved Local Governance of Highly Threatened Biological Resources

FY 2004 Obligation $7.9 million (DA)

The Philippines is among the hotspots in the world in terms of threats to biological diversity. Illegal and destructive fishing and severe overfishing in this center of global marine biodiversity threaten not only biodiversity but also food security and the productivity of the natural resource base. Illegal logging threatens livelihoods, lives, and biodiversity, and is the driving factor in deforestation in the Philippines, which has the highest rate in Southeast Asia. USAID, in partnership with the Philippine Environment and Agriculture Departments, assists local governments and stakeholders to improve the governance of the country's biological resources through greater transparency, accountability, responsiveness, and participation.

In FY 2004, USAID helped local governments, communities, and the Philippine Environment Department maintain 242,235 more hectares of forest cover under co-management plans. This significantly exceeded targets due to the large demand for forest management planning by local governments. Moreover, at least 280,000 hectares of forestlands were declared as forest reserves or protected areas. USAID assistance to local governments in coastal areas resulted in an additional 4,614 hectares of coastal waters and 1,942 hectares of marine sanctuaries being placed under improved management. Finally, at least 40 local government units contributed $420,000 to conserve and develop coastal and forest resources through law enforcement, resource rehabilitation, conflict management, and legislative actions.

In May 2004, in collaboration with USAID's ANE Bureau, USAID's Mission in the Philippines sponsored a well-attended regional Natural Resource Based Conflict Workshop, which highlighted the dynamics of natural resource-based conflicts in the Philippines and Asia; impacts of conflicts on natural resources and stakeholders; key lessons learned and tools used

in mitigating conflicts; and the current and future trends of natural resource conflicts in the Philippines. Aside from initiating the sharing of information among participants, the workshop, which was co-sponsored by the Philippine Environment Department, led to a department's order to designate conflict mitigation units to deal with natural resources-based conflicts at the provincial and local levels. The units will conduct an inventory of current and emerging resource-based conflicts and will assist local resource managers and users with tools and strategies for mitigating conflicts.

Through a grant to the Center for International Environmental Law, USAID also provided legal assistance to more than 30 communities to mitigate conflicts over the management of natural resources, many of which are in the Autonomous Region in Muslim Mindanao.

Partners include: Philippine Department of Environment and Natural Resources, Philippine Department of Agriculture-Bureau of Fisheries and Aquatic Resources, Regional Government of the Autonomous Region in Muslim Mindanao, provincial governments, Agricultural Cooperative Development International-Volunteers in Overseas Cooperative Assistance, Center for International and Environmental Law, Conservation International, Community-based natural resource users groups, Development Alternatives Inc., League of Municipalities of the Philippines, Tetra Tech EM Inc., and The Asia Foundation.

Box 5. Environmental Management in the Philippines

FY 2004 witnessed the launch of two ground-breaking, USAID-supported studies that will inform environmental management in the Philippines for years to come.

"In Turbulent Seas: The Status of Philippine Marine Fisheries" comprehensively assesses the status of fisheries management and sets the directions for sustainable fisheries in the country.

"Mapping Population-Biodiversity Connections in the Philippines," supported in collaboration with the Mission's Office of Population, Health and Nutrition, analyzes demographic data to explain how population issues affect management of critical biodiversity areas, and provides practical guidance to field practitioners.

HANNAH FAIRBANK, USAID

FROLIC IN THE PHILIPPINES: In 100 Islands, local youth participate in a Youth Environmental Camp, exploring some of the world's highest coral and fish biodiversity. Using community-based marine protected areas, USAID helps communities balance tourism and fishing activities with the conservation of the resources on which those industries depend.

EUROPE AND EURASIA

The Europe and Eurasia region contains a wide variety of ecosystems ranging from boreal forests and tundra to Mediterranean forests and shrubland. The region is home to one quarter of the world's forests, supports the world's largest population of bear and rare tigers, and serves as cross roads for large populations of migratory bird species shared with Africa, Asia, and North America.

Unfortunately, the region has undergone significant change recently, including deforestation, climate change, agricultural expansion, drainage of wetlands, modifications to coastlines and river courses, mining, road construction, and urban development.As a result, natural habitats have been reduced in size and fragmented, and are less able to support biodiversity.

Since 1989, USAID has worked with national and local governments and NGOs to improve biodiversity conservation in Europe and Eurasia. In FY 2004, USAID provided $1,250,000 to support biodiversity conservation efforts in the region.

Significant FY 2004 Conservation Achievement:

- Russia's first set of non-timber forest product regulations were signed into law by the governor of Khabarovsk Krai.

During FY 2004 in Europe and Eurasia, USAID funded biodiversity conservation in the Russian Far East and Siberia.

Russia

Improved Forest and Non-Timber Forest Products Management

FY 2004 Obligation: $1.25 million (FSA)

Approximately 22 percent of the world's forests are in Siberia and the Russian Far East. These natural taiga forests provide habitat for endangered species such as the Amur tiger, and represent an important economic resource. This is also an area of great cultural diversity and the home of numerous indigenous people, many of whom still practice traditional economies based on hunting, fishing, reindeer herding, and the use of non-timber forest resources.

Unfortunately, these forests are threatened by uncontrolled forest fires and poorly managed harvesting which destroys valuable wildlife habitat and other forest resources. USAID/Russia's Forestry Resources and Technologies (FOREST) Project aims to protect the forests of Siberia and the Russian Far East, and the rich biodiversity they contain, through fire-prevention activities

PREVENTING FIRES IN RUSSIA: "8 of 10 fires are caused by people," proclaims a billboard being used in a Russian fire prevention campaign modeled on the U.S. "Smokey Bear" campaign.

FOREST PROJECT

USAID/RUSSIA

BETTER FIRE MANAGEMENT: Russian foresters use a prescribed burn to reduce fuel loads in a Siberian forest. USAID is working with the Russian Ministry of Natural Resources, the Russian Center of Forest Protection, the Russian Federal Forestry Agency, and other partners to implement new forest-fire management regimes.

and the promotion of more sustainable practices such as value-added processing of non-timber forest products.

FOREST is implementing a public awareness fire prevention campaign modeled on the U.S. "Smokey Bear" campaign. In FY 2004, 451 schools, 63 mass media outlets, and 64 NGOs participated in this campaign. NGOs were trained to advocate on issues involving the environment based on USAID's fire prevention training. It is estimated that 2.5 million people were reached through public service announcements. Surveys indicate that ninety-one percent of people now recognize the FOREST Project's message that "8 out of 10 forest fires are caused by people." By raising public awareness the program hopes to change public behavior and reduce anthropogenic forest fires in the Russian Far East and Siberia.

The FOREST project also completed a study on the sustainable harvesting of non-timber forest products (NTFPs) in Russia in FY 2004. From this work, a group of experts drafted a set of principles on sustainable NTFP harvesting in Russia. These principles have since been adapted by the local duma (parliament), and signed into regulation by the Governor of Khabarovsk Krai. This is a first, as prior to this there were no regulations regarding the harvesting of NTFPs in Russia. These regulations may be adopted in other states in the Russian Far East, as they are now being examined by dumas of Sakhalin and Krasnoyarsk.

Partners include: Winrock International, Heron Group, Chemonics International, Russian Ministry of Natural Resources, Russian Center of Forest Protection, Sukachev Institute of Forestry, Russian Federal Forestry Agency, Wildlife Conservation Society.

LATIN AMERICA AND THE CARIBBEAN

The Latin America and the Caribbean (LAC) region is home to the world's largest rainforest, the largest wetlands, and the second largest barrier reef system. These globally important habitats support an equally impressive array of biodiversity. The region's Galapagos Islands are home to more species of amphibians per unit area than anywhere else on earth. Latin America is home to 40 percent of all the species found in tropical forests throughout the world. In addition, 40 percent of the plant life in the Caribbean is found nowhere else on earth.

Unfortunately, the region's biodiversity is threatened by habitat loss. The rate of deforestation in the region is one of the highest in the world, and two-thirds of the region's coral reefs are threatened. This loss of habitat threatens the region's biodiversity as well as the livelihoods of people dependent on natural resources.

In recognition of the important role of natural resources and biodiversity in Latin America and the Caribbean, USAID supported biodiversity conservation activities in more than 20 countries in the region, with total FY 2004 funding of $59 million.

Significant FY 2004 Conservation Achievements:

- USAID began a participatory consultation process to design a regional conservation strategy for the entire Amazon Basin.
- In Belize, 11 new protected areas were declared and a National Protected Areas Strategy was developed as a direct result of USAID's Regional Environmental Program for Central America.
- In Bolivia, nearly 5.2 million hectares of protected areas achieved adequate management status.
- In Brazil, the area under sound forest management plans and certification programs in the Amazon and Atlantic forests more than doubled its target, reaching 680,000 hectares.
- In Paraguay, USAID supported a local partner to have the Gran Chaco Biosphere Reserve declared part of the Man and the Biosphere Program of UNESCO. This will be the largest area in the country to be named as an international conservation area.

USAID missions and regional programs funded biodiversity conservation programs in more than 20 countries throughout Latin America and the Caribbean in FY 2004.

Jamaica

Ridge to Reef Watershed Management

FY 2004 Obligation: $1.688 million (DA)

Jamaica has some of the most beautiful and biologically diverse habitats on earth, with many native and endemic species of animals and plants. Tourism, the island's most important economic sector, depends on the adequate maintenance of Jamaica's natural resource base. However, the overexploitation of coastal resources, the conversion of forests to other uses, and the indiscriminate disposal of waste in industrial and urban areas are adversely affecting the island's land and marine ecosystems.

USAID's emphasis is on reversing the trend of environmental degradation through the adoption of environmentally sound practices and policies. The beneficiaries include communities and resource users in the watersheds and coastal zones, the private sector — particularly tourism related enterprises — and the Jamaican populace in general. USAID is implementing three main biodiversity conservation projects. The Ridge to Reef/Watershed Project focuses on upper watershed conservation, introducing sustainable agricultural practices, reforestation, and public education and awareness. The Coastal Water Quality Improvement Project addresses issues of water quality and its effects on the marine and coral reef ecosystems. USAID's support to the Parks in Peril project focuses on terrestrial protected areas, helping local communities develop management plans and various approaches to conserve these ecosystems.

INTEGRATED WATERSHED MANAGEMENT: This glass-bottomed boat brings tourists close to nature in Jamaica. However, the coastal ecosystems sustaining that tourism are threatened by upstream water pollution and erosion. USAID's programs address the entire watershed as an integrated system.

CHRIS HOWELL, PA GOVERNMENT SERVICES

USAID/JAMAICA

GREATER ENVIRONMENTAL AWARENESS: The "Action Boyz" theatre group educates communities about how their activities affect coral reefs. Communities are encouraged to clean up their waste and reduce the amount of effluent they release downstream.

The Agency supports several local NGOs and community-based organizations to promote environmentally sound practices. These organizations are developing new models for community participation and "ownership" in their effort to introduce and sustain improved environmental practices in the important tourist destinations of Negril, Ocho Rios, and Portland. NGOs like the Negril Environmental Protection Trust, St. Ann Environmental Protection Agency, Friends of the Sea, and the Negril Coral Reef Preservation Society carry out environmental research, monitoring, and community education programs. USAID-supported NGOs have also introduced more environmentally friendly economic activities, including ecotourism ventures and alternative employment opportunities for fishermen in overfished waters. Still other NGOs have promoted wildlife protection, sanitation education, gray water recycling, and organic farming.

© JERRY BAUER 2004. ALL RIGHTS RESERVED.

ISLANDS OF LIFE: Jamaica is home to 25 species of reptiles found no where else on earth. Because of their isolation from the mainland, islands often contain large numbers of unique species, making many of them biodiversity hotspots.

In FY 2004, USAID's biodiversity activities in Jamaica focused on raising public awareness about the importance of conservation. Activities included the production of posters and skits, and participation at community and national fairs and exhibitions, highlighting the richness of the country's biodiversity and the need to protect it. USAID supported Jamaica's only terrestrial national park, the Blue and John Crow Mountain National Park, by educating more than 100 community members residing within the boundaries and buffer zone of the park about the importance of the park's endemic and special species.

USAID works with the USDA Forest Service through an Inter-Agency Agreement to facilitate capacity building and income generation for the Jamaica Protected Areas Network. This umbrella group of NGOs is responsible for the management of the country's biodiversity-rich protected areas and parks.

Partners include: National Environment and Planning Agency, Ministry of Land and Environment, Jamaica Conservation and Development Trust, USDA Forest Service, Jamaica Protected Areas Network, The Nature Conservancy, Negril Environmental Protection Trust, St. Ann Environmental Protection Agency, Friends of the Sea, and the Negril Coral Reef Preservation Society.

BLUE MOUNTAINS: USAID supports Jamaica's only terrestrial national park, the Blue and John Crow Mountain National Park, by educating residents within the park boundaries and buffer zones about the value of conservation.

© JERRY BAUER 2004. ALL RIGHTS RESERVED.

Box 6. Protecting the Great River Watershed in Jamaica

Montego Bay Marine Park lies at the mouth of the Great River Watershed. Home to mangroves, sea grasses and coral reefs, the park is highly impacted by nearby human populations through polluted water from the Great River. In response, USAID's Ridge to Reef Watershed Management Project (R2RW) implemented an integrated approach to improved watershed management and water quality that also strengthened farmer livelihoods and increased rural access to sanitation facilities.

R2RW began with participatory processes to form a Watershed Management Committee consisting of local residents, government agencies and other interested people. The committee developed action plans that identified how to address the largest threats to watershed health.

To get local communities motivated and educated about how their practices were damaging downstream corals, R2RW organized community theater called "River Action with the Action Boyz." In response, communities organized cleanup days and built garbage receptacles. R2RW also helped other communities build improved school latrines.

At the Pisgah All Age School near the headwaters of the Great River, the Parent Teacher Association received a USAID grant to build a constructed wetland for latrine wastes. The school was fitted with gutters and large tanks to collect water. Flush toilets and underground septic tanks were installed. Mothers volunteered labor to create a large flat space for two sealed pans into which septic tank wastes would flow. Filled with rocks and planted with local reed grasses, the "wetlands" in the pans rendered harmless 99.9 percent of the effluent from the septic tanks. If adopted widely across the watershed, technologies like these will dramatically clean up the Great River water, benefiting human health and downstream coral ecosystems.

Excess soil sediment in waters is also a threat to reefs because it can smother corals. To reduce extensive soil erosion in the Great River Watershed, R2RW worked with farmers groups and conducted on-farm training to convince farmers to plant indigenous species of timber and fruit trees, improve drainage, and establish vegetative and other barriers on hillside contours. Farmers also adopted practices like minimum tillage, zero tillage and more responsible use of pesticides and inorganic fertilizers. In addition to new crops like fruit trees, existing systems were enhanced, like generating improved productivity of pineapples in the previously booming pineapple belt of the upper Great River Watershed.

R2RW's integrated activities in the Great River Watershed, funded with a combination of biodiversity, agriculture, and other types of dedicated sources, illustrate USAID's fundamental philosophy of, and expertise in, achieving a combination of development and conservation goals.

USAID/JAMAICA (LEFT AND RIGHT)

ARTIFICIAL WETLAND (before and after): The Pisgah elementary school treats its septic wastes using this wetland created with rocks and local reed grasses, producing virtually pure water for release into the watershed.

LAC Regional Programs

LAC Support Team

FY 2004 Obligation: $0.976 million (DA)

The LAC regional program staff provide direct technical support to LAC Bureau missions and help coordinate assistance from other USAID Washington offices in assessing biodiversity priorities, designing activities, conducting field visits, and evaluating impacts. The staff also helps the Agency and Bureau allocate biodiversity funds among Bureau missions and represents the Bureau in inter-agency collaborative efforts for conservation. The LAC regional staff manages two flagship regional programs —Parks in Peril and the Amazon Basin Conservation Initiative, described below.

Parks in Peril

FY 2004 Obligation $1.518 million (DA) plus mission matches totaling $3.358 million

Since 1990, the Parks in Peril program has worked to improve the protection of 45 critically threatened national parks and reserves in Latin America and the Caribbean. USAID investments have safeguarded the most threatened ecosystems in the region, including cloud forests, coral reefs, tropical forests, and savannahs.

The Parks in Peril program strategy has been to strengthen partner organizations and build sustainable capacity to achieve enduring site conservation results. In FY 2004, the program increased management capacity in 12 parks in the areas of personnel, financial management, operation, and strategic planning.

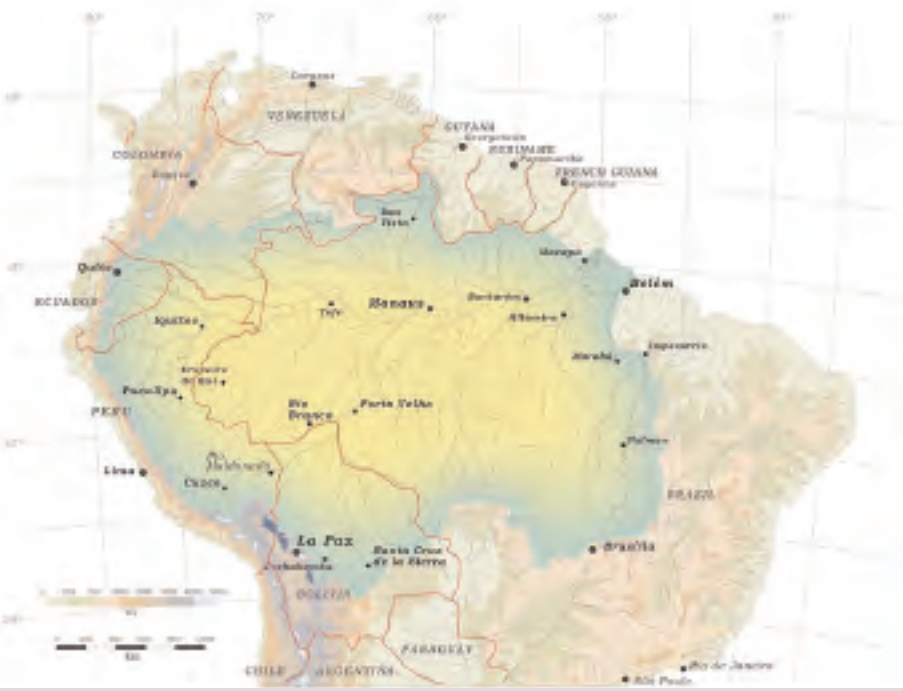
In Bolivia, the program financed the hiring of additional onsite personnel (10 park guards, two lawyers, and one natural resource technician) to support the management and protection of the Amboro-Carrasco Conservation Unit. All of the new park guards were born in communities close to or within the Conservation Unit, and the Bolivian Government has committed to maintaining these positions beyond the life of the program.

In Colombia, Parks in Peril supported the development of a land tax exemption for conservation in partnership with the Encino Municipality, the town council, and the technical team of Fundación Natura. This mechanism provides a tax incentive for private landowners who wish to conserve biodiversity and water flow on their lands.

In FY 2004, protected areas were also strengthened through USAID contributions to the Parks in Peril program in the Dominican Republic, Ecuador, Guatemala, Jamaica, Panama, and Peru.

Partners: The Nature Conservancy, local NGOs, and local governments

The Amazon Basin



AMAZON BASIN INITIATIVE: The seven million km² Amazon Basin includes portions of eight countries and contains the largest area of contiguous and intact tropical forest in the world. In FY 2004, USAID began planning a new regional program to conserve Amazonian biodiversity.

Amazon Basin Conservation Initiative

FY 2004 Obligation $0.5 million (DA), plus $1.5 million (DA) obligated by USAID/Brazil, $8.0 million (DA) set aside

During FY 2004, USAID's Latin American and Caribbean Region undertook a participatory consultation process to begin the design of a regional conservation strategy in the Amazon basin. The Amazon Basin Conservation Initiative represents a strategic investment by USAID to address conservation threats and opportunities on a regional scale, responding actively to high levels of Congressional interest in the Amazon and complementing the strong and long-standing conservation programs of LAC missions.

A widely participatory process with partners, regional governments, other donors and U.S. Government agencies is informing the Initiative's development and implementation. The bulk of the design process will be carried out in FY 2005, and the Initiative will be primarily implemented during the period FY 2006 - 2010. A coordinator was also hired to oversee the process. Please refer to the article on USAID's work in Brazil (page 67) for a description of mission-obligated FY 2004 activities within the Amazon Basin Conservation Initiative, which focus on management of indigenous areas within the Brazilian Amazon.

© STEVEN SWIERENGA

TOUCAN: There are 37 species of toucans found throughout Latin America from Mexico to Argentina. By conserving entire ecosystems, USAID protects habitat for them and for many other bird species.

Caribbean Regional Program

Improved Environmental Management of Public and Private Entities

FY 2004 Obligation $0.383 million (DA)

The Caribbean Regional program works to conserve the region's terrestrial and marine resources to promote economic development prospects in the region. The program focuses on Eastern Caribbean countries and works primarily in Antigua and Barbuda, Dominica, Grenada, St. Kitts, St. Lucia, and St. Vincent.

Tourism is an important sector in the Caribbean economy, and one that is dependent on the region's natural resources and biodiversity. In FY 2004, USAID's Caribbean Hotel Environmental Management Initiative provided training to hotel owners in environmental impact assessments, energy audits, and water conservation. Of particular note this year was the benchmark certification of the island of Dominica under the Green Globe Environmental Certification Program. These achievements help improve biodiversity conservation through the increased public awareness of the biological importance of specific sites and the need to have integrated management in the associated areas surrounding these locations.

USAID worked with the Caribbean Community Secretariat (CARICOM) on a regional program to assist small and medium-sized enterprises and the tourism sector develop cleaner production activities to help halt environmental degradation and biodiversity loss. USAID also supported CARICOM's Regional Sustainability Fund, which provides a source of

independent funds from user fees for conservation of marine and terrestrial parks.

Through the Parks in Peril program, USAID worked with The Nature Conservancy to assess marine and coastal sites in the Grenadines. The program helped develop and map a terrestrial classification scheme and a threats assessment framework. The program also trained local scientists and other conservation practitioners on ecoregional planning methods, tools, and applications.

Partners include: Caribbean Environmental Health Institute, Caribbean Association of Industry and Commerce, Caribbean Tourism Organization, Caribbean Community Secretariat, and Organization of Eastern Caribbean States. Grenada partners include: the Ministries of Agriculture, Health and the Environment, Public Works and the Solid Waste Management Authority, and the NGOs RECORDS, GRENSAVE, and GRENCODA.

Regional Environmental Program for Central America

PROARCA: Improved Environmental Management in the Mesoamerican Biological Corridor

FY 2004 Obligation $5.771 million (DA)

USAID's Regional Environmental Program for Central America, known by its Spanish acronym PROARCA, supports improved environmental management in the Mesoamerican Biological Corridor (Central America and Mexico). PROARCA implements an environmental program consistent with what is outlined under the presidential accords between Central America and the United States (CONCAUSA).

In FY 2004, PROARCA directly improved the management of 48,123 hectares in the protected areas of Consiguina Volcano, Complejo Conchagua, and Estero Padre Ramos in Nicaragua. Belize declared 11 new protected areas and developed a National Protected Areas Strategy as a direct result of PROARCA's efforts. The Environment Ministry of El Salvador developed a National Protected Areas Law. The PROARCA climate change program enhanced protected area management capabilities for all of the protected areas in the region (approximately 64.75 million hectares for Central America) by improving managers' access to fire monitoring, prevention, and mitigation information with a satellite web-based fire monitoring tool.

PROARCA trained 175 professionals in the use and application of new tools for improving protected areas management in FY 2004, including 40 park guards for terrestrial and marine parks. Technical documents (including two new training guides for park guards) developed for this program provided the basis for the training workshops. The tools these professionals acquired included site conservation planning, financial planning, and management of protected areas. In addition, a regional strategy for the development of private natural reserves was completed this fiscal year.

PROARCA made advances in the co-management of protected areas in FY 2004, by signing an agreement with the State Forestry Authority and three local municipal governments in Honduras, and providing technical support for the legal basis of co-management in El Salvador. A PROARCA-sponsored workshop on payments for environmental services was well attended, with approximately 200 participants from the region. PROARCA actively promoted the use of the Tropical Forest Conservation Act to secure sustainable financing for protected areas in the region.

USAID and the United Nations Foundation signed a Grant Agreement for the Mesoamerican Coral Reef Alliance in FY 2004. This alliance between USAID and the Foundation with its implementing partner International Coral Reef Action Network (ICRAN), was formalized under the President's Opportunity Alliance Initiative to promote economically and environmentally sound management of the Mesoamerican coral reef — the second longest barrier reef in the world. USAID is providing in-country knowledge and program experience in promoting watershed management, hotel pollution prevention practices, environmentally sound tourism practices, and management of biologically important ecosystems.

Also in the marine sector, for the first time in the history of the Central American lobster and

shrimp fisheries sector, with PROARCA support, industry professionals, fishermen, academic experts, government officials, and NGOs gathered together to discuss their experiences. An agreement was reached to support the phasing out of the use of compressed air equipment (scuba diving) in the collection of lobster, with Nicaragua issuing a new law to this effect. Scuba diving practices in the region frequently lead to severe physical impairment (e.g., paralysis) for a large percentage of divers due to improper equipment use, as well as overharvesting of the resource. Progress was also made in identifying other shrimp and lobster management practice improvements that could be supported broadly. A manual of best management practices was developed and disseminated.

Partners include: Madera Verde, Finzmos, Exchange, Layasiksa, Sagnilaya, Defensores de la Naturaleza, Centro Agronómico Tropical de Investigación y Enseñanza, Fundación Salvadoreña para Investigaciones del Café, SalvaNatura, Asociacion Gremial de Exportadores de Productos No Tradicionales, Asociación de Organizaciones del Corredor Biológico Talamanca-Caribe.

PROARCA

LEGAL LOBSTERS IN NICARAGUA: USAID consultant Margarita Jurado holds up the results of improved traps that capture only large-sized lobsters. Combined with a new Nicaraguan law to eliminate the dangerous and unsustainable practice of commercial scuba diving for lobsters, these traps will help the fisheries recover and will eventually bring greater incomes to the fishing community.

Bolivia

Natural Resources Sustainably Managed

FY 2004 Obligation: $ 4.141 million (DA)

USAID is working to conserve Bolivia's biodiversity by supporting efforts to improve parks and protected areas management and by promoting community-based forest management. In FY 2004 USAID programs were active in nearly one-half of Bolivia's nationally declared protected areas, which account for approximately 16 percent of the national territory. Of this area, nearly 5.2 million hectares of protected areas achieved adequate management status in FY 2004. A protected area is considered to have adequate management when immediate conservation threats are deterred, a long-term management plan is developed, local NGOs involved in park management are strengthened, long-term financing is secured, and the local constituency is supportive. In addition to directly supporting management at these parks, USAID supports activities in several other parks and reserves, totaling nearly 4.4 million hectares.

The USAID-funded parks program continues to support efforts to ensure adequate protected area management through the direct involvement of communities living in and around protected areas. It does this by demonstrating the economic benefits of these areas and through institutional strengthening and the development of alternative means of income generation.

The parks program promotes the recognition and valuation of environmental services provided by the conservation of protected areas. For example, PROMETA, a Bolivian NGO working with the USAID Parks in Peril program, successfully completed an economic valuation study of peoples' willingness to pay to conserve the watersheds around the City of Tarija. These watersheds are found in the Sama Biological Reserve and provide about 70 percent of the water supply for the city. Results of this analysis were used to establish a public-private entity whose purpose is to fund watershed conservation activities. Capitalization of the fund is now underway.

As part of their institutional strengthening efforts, USAID's implementing partners are coordinating their activities in several geographic areas, including Carrasco and Madidi National Parks and Altamachi Departmental Park. In these instances, the NGOs meet regularly to discuss planning and program implementation. The Coordinating Committee of the Amboró-Madidi Corridor (CCCAM), headed by the Director General of Biodiversity of the Ministry of Sustainable Development, is officially constituted and meets regularly to coordinate activities along this important biological corridor. Through WWF, USAID funds the CCCAM coordinator.

USAID's environmental programs in Bolivia are complemented by an innovative grant management model called the Foundation for the Conservation and Sustainable Use of the Environment (PUMA) known as Fundación PUMA in Bolivia. Fundación PUMA was capitalized in 2003 through a bilateral debt reduction agreement with the United States under the Enterprise for the Americas Initiative. After more than a year of operation, the foundation has earned a solid reputation as a competent organization and is

KRISTINE HEINE, USAID

BOLIVIA'S PROTECTED AREAS: USAID works in nearly one-half of Bolivia's protected areas, and has helped nearly 5.2 million hectares achieve adequate management standards such as existence of a management plan, strengthened NGO involvement, and long-term financing.

fulfilling its mission of funding natural resource management activities through grants to civil society organizations.

In its first year of activity, Fundación PUMA approved more than 25 projects for almost $1.7 million in grants to community-based groups. The resources of Fundación PUMA, which come to about $17.5 million, are a significant complement to USAID environmental programs in Bolivia, especially to the forestry and protected areas programs.

In FY 2004, significant gains were made in promoting tourism and ecotourism activities. Ecotourism is an important tool for conservation because it seeks to protect cultural and natural heritage, biodiversity, and ecosystem services while providing economic opportunities for local communities.

For example, Chalalan EcoLodge, a community managed and operated effort in Madidi National Park, was cited as one of the premier jungle experiences by National Geographic Traveler. The Lonely Planet Guide Book has included several references to ecotourism in national parks (including Carrasco National Park) which has greatly increased visitation and revenues. Moreover, the community of San Miguel del Bala has ceased subsistence hunting to concentrate community efforts on new ecotourism ventures, and the Bolivian Vice-ministry of Tourism is replicating the Tourism Agency Ranking Systems established by USAID partner Conservation International. All these efforts are directly linked with conservation at some of Bolivia's most important protected areas, and all provide direct economic benefits to local communities.

USAID continues to test innovative ways to promote the creation and sustainability of departmental, municipal, and private reserves and protected areas, including Curichi Cuajo Municipal Park and El Corbalan Private Protected Area.

Partners include: Bolivia's National Protected Area Service (SERNAP), World Wildlife Fund, Protección Medio Ambiente de Tarija (PROMETA), Fundación Amigos de Naturaleza (FAN), The Nature Conservancy, Conservation International, Wildlife Conservation Society, and PUMA Foundation.

Brazil

Environmentally Sustainable Land Use

FY 2004 Obligation: $6.650 million (DA)

USAID's environmental program in Brazil works to strengthen local civil society and engages the private sector and government officials to favor conservation and sustainable use of forest resources rather than forest conversion to agriculture. The goals of the program include improved forest management, linking forest communities and markets, and improved landscape-level planning and monitoring of land-use changes. This comprehensive, sustainable

JEAN BRENNAN, USAID

BRAZILIAN WATERSHED: Community forestry, indigenous management rights, and protected areas are tools that USAID uses to sustain Brazil's biodiversity.

development approach to biodiversity conservation continues to be reflected and advanced by the administration of President Lula da Silva.

In FY 2004, the area under sound forest management plans and certification programs in the Amazon and Atlantic forests more than doubled its target, reaching 680,000 hectares. The area under certified community forest management also exceeded the target of 10,000 hectares, reaching 15,000. On a national scale, USAID-sponsored sustainable land-use planning now covers an estimated 51,000 square kilometers of vitally important Brazilian rainforest, more than a four-fold increase from the original FY 2004 target.

Much of the deforestation that continued in the Amazon in 2004 is clustered along federal highway BR-163, including an as-yet unpaved stretch where deforestation is frequently associated with illegal land claims. USAID supports three Brazilian consortia with 21 partner organizations, working to strengthen the capacity of civil society to participate in public hearings on large infrastructure projects such as paving of this 1,000-kilometer segment of BR-163.

After USAID partners from the Green Highways consortium presented the Minister of National Integration with a map showing that land clearing in 2004 already exceeds computer projections 10 years into the future, the Minister agreed to postpone paving this highway until the regional participatory planning process is completed. USAID has supported

ERIC STONER, USAID/BRAZIL

BIODIVERSITY IN A BOTTLE: This merchant in Brazil carries an assortment of medicinal oils, resins, and bark. USAID helps Amazonian communities use management plans to guide harvesting to ensure a lasting supply of forest products that meets market demand for traditional medicines.

local organizing to include the voice of otherwise excluded groups in the regional planning process, including indigenous populations in the Xingu River basin, rubber tappers and Brazil nut collectors, and riverine dwellers, all whose livelihoods depend on healthy diverse forests.

In FY 2004, USAID also contributed to implementation of the Amazon Conservation Initiative by focusing on the Xingu River basin where a complex of 2.8 million hectares of officially recognized and demarcated indigenous lands comprise the world's largest tract of protected tropical forests.

USAID supports village-level assistance equipping Xingu and Kayapo Indians to protect their own traditional forested lands. Recognizing the threat from outside their reserve borders, Indians are entering into a dialogue with ranchers, grain farmers, and federal, state, and local officials to promote responsible land-management practices and demand compliance with environment norms. As a first step, farmers have pledged to restore vegetative cover to stream banks to improve water quality in the headwaters of the Xingu River basin, draining into these Indian reserves.

Through direct support for village-level conservation actions, USAID expects to contribute to a body of indigenous experience that will influence Brazilian legislation, strengthening provisions for protection of traditional knowledge and recognition of the value of indigenous stewardship of biodiversity and environmental services.

Several of Brazil's largest pulp and paper companies are contributing to biodiversity conservation in Brazil's highly threatened Atlantic Forest after concluding that investment in landscape mosaics of plantations intermingled with native forests helps control pests and forest fires. A unique public-private partnership between these companies and a USAID-supported environmental NGO is helping develop low-cost techniques for forest restoration as well as simplified policies and procedures for official recognition of biodiversity conservation efforts on private lands. Furthermore, USAID also works through community-level producers groups to provide access to basic market information and the science-based forest management practices that qualify smaller community businesses for market niches.

Partners include: World Wildlife Fund, The Nature Conservancy, Conservation International, Woods Hole Research Center, the Tropical Forest Foundation, USDA Forest Service, the Smithsonian Institution, the University of Florida, the State University of New York at Albany, Fundação Floresta Tropical, Institute for Man and Environment in the Amazon, Environmental Research Institute for the Amazon, Society for Wildlife Research and Environment, Research and Extension in Agroforestry Systems for Acre State, Institute for Socio-Environmental Studies of Southern Bahia, SOS Amazonia Foundation, Vitória Amazônica Foundation, and International Education Institute of Brazil.

Colombia

Forestry and Sustainable Development Program

FY 2004 Obligation $4.089 million (ACI)

USAID's environment program in Colombia is working to conserve the country's biological resources by strengthening indigenous communities' participation in natural resources management and improving the management of Colombia's protected areas.

In collaboration with the Amazon Conservation Team, USAID helped indigenous community members map, document, and add 19,000 hectares to Indi Wasi National Park and its buffer zones. The book, "Spatial Analysis of the Transformation of the Forests of the Colombian Amazonian Piedmont — Alto Fragua Indi Wasi National Park" was also published, demonstrating the magnitude of the impact of colonization on the forests of the Piedmont. This analysis led to the creation and submission to the Colombian National Parks Unit of a preliminary baseline document for a management plan for Indi Wasi Park. This was an important follow-up to the Inter-Administrative Agreement with the indigenous Inganos of Caquetá.

USAID also contributed toward the declaration of a Special Protected Area in the Predio UMIYAC (Union of Traditional Healers of the Colombian Amazon), an ancestral site of the Kofán Indians near the Guamuez River. Together with the Universidad del Rosario, publications were created that documented the biological and cultural values of the area,

© JERRY BAUER, 2004. ALL RIGHTS RESERVED.

BLUE MORPHO: With a wingspan of six inches, this male Blue Morpho butterfly can be found from Mexico through Central America to Colombia and Venezuela.

particularly the vine Paullinia yoco, a medicinal plant. To help local people capture the monetary benefits from medicinal plants, USAID supported a compilation of legal and international norms on the use of medicinal germplasm. During the last two years, USAID also helped local healers create 56 medicinal gardens.

In addition, in FY 2004 USAID obligated funds to support strengthening Columbia's National Parks Unit. With these funds, beginning in 2005, the U.S. Department of the Interior will help the Colombian National Parks Unit strengthen its institutional presence in protected areas, and train its staff in improved management tools, including local community participation and environmental education.

Partners include: Amazon Conservation Team, Colombian National Parks Unit, and U.S. Department of the Interior.

Dominican Republic

Improved Polices for Environmental Protection

FY 2004 Obligation: $ 1.418 million (DA)

USAID supports the conservation of biodiversity and natural resources in the Dominican Republic by strengthening the institutions that create, monitor, and implement environmental policies.

In FY 2004, USAID assisted the Secretariat of the Environment and Natural Resources develop a Strategic Management Plan for the Dominican Biosphere Reserve. The reserve includes three national parks (Enriquillo, Bahoruco, and Jaragua), four buffer zones, and three transition zones. When operational, the management plan will provide a blueprint for simultaneously protecting the rich biodiversity in the parks and promoting sustainable economic growth in one of the least developed areas of the country. USAID, through the Parks in Peril program, facilitated the creation of Conservation Area Plans for the Armando Bermúdez and Parque del Este National Parks. USAID also funded the Ecoregional Planning Assessment of Hispaniola.

In FY 2004, USAID also continued to provide protected area management education and capacity building opportunities. For example, USAID supported study trips to U.S National Parks for Secretariat officials to up-grade the Secretariat's capacity to efficiently manage the vast Dominican national park/protected area network. Additionally, a long-term training program in ecological interpretation was launched by USAID in FY 2004. When completed, this nine-module course will have prepared a cadre of Dominican professionals in the production and diffusion of ecological interpretation materials for the country's network of national parks and protected areas. The course is also preparing the participants to become "trainers of trainers," thereby expanding the number of qualified ecological interpreters. USAID also supported U.S.-based training in the management of protected areas for a key staff member within the Sub-Secretariat of Protected Areas and Biodiversity.

In FY 2004, USAID launched its Environmental Investment Protection Fund in the Dominican Republic. This initiative provides a

maximum USAID contribution of $50,000 with a one-to-one contribution requirement from the grant recipient. A number of these small grant projects are contributing directly to biodiversity protection, such as: (1) a dive boat buoy investment that protects and contributes to the regeneration of coral reefs; (2) an ecotourism project that promotes the sustainable use of mangrove swamps and a humpback whale sanctuary; and (3) an ecological interpretation center co-management initiative.

Partners include: International Resources Group, The Nature Conservancy, the Dominican Republic Secretariat of Environment and Natural Resources

Ecuador

Biodiversity Conservation in Globally Significant Protected Areas and Buffer Zones

FY 2004 Obligation: $ 5.931 million (DA)

USAID's Biodiversity Conservation Program emphasizes protection of biologically-important areas within Ecuador's protected areas system, buffer zones, and other areas of high biological importance. Emphasis is placed on strengthening local conservation organizations, increasing community participation in natural resource management, and supporting the protection of globally significant species and areas.

In FY 2004, as in previous years, USAID supported conservation in indigenous lands. The environment program continued to help strengthen indigenous organizations, and since mid FY 2003, targeted indigenous groups have improved management of more than 184,000 hectares. USAID helped Cofan and Huaorani indigenous groups exert greater control over their territory and develop income generating activities that reduce incentives for coca production by expanding microenterprises and establishing ecotourism infrastructure to eliminate the need for unplanned timber harvests when income is needed.

USAID supports activities in and around several of Ecuador's most important parks and protected areas, including an important effort

USAID/ECUADOR

GALAPAGOS SEA LION: A sea lion frolics in the Galapagos of Ecuador. USAID is working to strengthen management of the Galapagos Marine Reserve which should reduce the numbers of sea lions and seals tangled in fishing nets.

in the Galapagos Islands. Conservation efforts in the Galapagos Marine Reserve, a UNESCO world heritage site, include technical assistance and training to further enhance local governance. FY 2004 was a difficult year in the Galapagos Islands, with a change in political leadership, and threats to the Special Law for the Galapagos, a regulation that aims to conserve biodiversity and balance socioeconomic development. In response, USAID supported a consultation by experts in conflict management and mitigation. The results of this consultation now serve as the basis for future program planning and coordination with other concerned donors. Coordination with USAID's Democracy Program has targeted municipal institutions for strengthening and improving governance capacity.

A second element of the Galapagos strategy is to improve the enforcement of fishing regulations. In FY 2004 USAID supported the efforts of an alliance of nine NGOs to reduce the threats posed by overfishing. The Agency has also continued to develop community-based ecotourism activities on the island of Isabela as an alternative income source to illegal fishing and overfishing. In the previous year, USAID helped improve the Galapagos National Park's enforcement capacity by providing a full retrofit and maintenance of the park's main ocean-going vessel as well as donating a new amphibious airplane. These two investments continue to yield benefits in their capacity to help survey and protect Ecuador's Galapagos Marine Reserve against illegal fishing and narcotics trafficking.

USAID works with local partners, communities, other donors, and the Government of Ecuador to consolidate and improve management of the Condor Bioreserve. The Bioreserve provides valuable environmental services, as its forested watersheds are the source of water for Quito and its metropolitan area. It also provides critical habitat for the Andean Condor, Ecuador's national symbol and the largest flying bird on earth. The goal is to integrate the protected areas that constitute the Bioreserve and their buffer zones into a comprehensive management unit.

USAID's work in this area is showing results. In FY 2004, government and stakeholder capacity to manage the 776,000 hectares of the four protected areas of the Bioreserve improved to a score of 63 percent on the management index used by USAID partner's The Nature Conservancy. Approximately 29 kilometers of protected areas were delimited, 43 park guards were funded, and 23,000 hectares of paramo (alpine pastures) were protected from uncontrolled burning and illegal hunting and fishing. Additionally, Quito's watershed protection fund, which USAID supports, invested more than $200,000 in conservation projects and leveraged more than $381,000 from other sources.

Partners include: Galapagos National Park, Charles Darwin Foundation, World Wildlife Fund, Chemonics International, The Nature Conservancy, CARE, Oikos, and Jatun Sacha.

Guatemala

Improved Natural Resources Management and Conservation of Biodiversity

FY 2004 Obligation: $2.278 million (DA)

Guatemala contains the largest area of cloud forest and wetlands and the highest population of large cats in Central America. These resources are ecologically and economically important to the country. Enterprises based on natural resources, such as tourism and forestry, comprise a significant part of Guatemala's jobs and export earnings. USAID's environment program focuses on helping build capacity to manage these resources, using management arrangements that allow for civil society participation, provide direct economic incentives for conservation, and promote sustainable development. The program also helps the government develop policies that offer incentives for sustainable land use and the conservation of biodiversity.

In FY 2004 USAID, through its support for the Parks in Peril program, was active in the Maya Biosphere Reserve, which is comprised of Laguna del Tigre and Sierra Lacandón National Parks; the Sierra de las Minas Biosphere Reserve (Motagua – Polochic RAMSAR wetland region); and the Atitlán Volcanoes Bioregion.

In the Atitlán Volcanoes Bioregion, three new private reserves representing 1,431 hectares were declared and management plans were prepared for each. An additional 420 hectares were declared as a municipal protected

area in San Juan La Laguna, resulting in a total of 1,159 hectares in the Atitlán area under municipal jurisdiction. In Motagua-Polochic more than 5,000 hectares of forest were incorporated into the Forestry Incentives Program, which helps cover the costs of reforestation.

During the past year, USAID supported the development of the Master Plan for the Sierra Lacandón National Park through a participatory process, and submitted the plan to the National Protected Areas Council for approval. Park staff were trained in fire management, fire breaks were implemented, and patrols were conducted. As a result of these patrols, reports on park invasions were submitted to authorities, but due to lack of government capacity and political will the invasions were not stopped.

Progress was made in Atitlán in municipal park management in FY 2004. Tourism infrastructure and administrative capacity were established in the municipalities of San Pedro and Santa Clara. San Pedro developed an operating plan, and defined a co-management structure that includes local government authorities, NGO, and civil society organizations; a financial plan is under development. With financial resources leveraged from other sources, trails, a visitor center, and a geology museum were constructed. In Santa Clara Municipality, two park guards were hired by the municipality. In San Marcos and San Juan municipalities, boundaries were delimited and mapped in FY 2004, and it is anticipated that land use and best management practices will be finalized in FY 2005.

MICHAEL DONALD, USAID/G-CAP

GUATEMALA FIRE PATROL: As part of implementing their community co-management plan, volunteers conduct patrols on bike to monitor park activities and promote fire prevention.

In FY 2004, the 2003-2007 Management Plans for Sierra de las Minas and Bocas del Polochic protected areas in the Motagua-Polochic bioregion were approved by the National Protected Areas Council. Defensores, a Guatemalan conservation organization and Parks in Peril partner, actively engaged in fire prevention in the parks by establishing fire breaks, conducting prescribed burns, and establishing voluntary brigades to conduct patrols and monitoring activities. In addition, the Conservation Plan for Monte Espinoso National Park in the Motagua area was created and presented for consultation to new mayors, and private owners to promote declaration of municipal and private reserves. Agreements were signed with 11 municipalities that included the payment of the salary of one park guard per municipality. This is a significant success stemming from the establishment of the Board of Directors for the Sierra de las Minas Biosphere Reserve.

There is evidence that this work is having a positive impact on conservation. USAID's partner's efforts to protect the nesting sites of the endangered scarlet macaw are having some success. Biological monitoring in the Maya Biosphere Reserve indicated that of 19 nests monitored, 17 chicks (90 percent) survived. In the Atitlán region,

monitoring data for indicator species such as frogs (Eletheurodactylus), horned guan (Oreophasis) and bees (Bombini and Euglossini) showed no significant changes compared to the baseline. In the Motagua-Polochic region, data show no changes in bromeliads. Manatee numbers also appear to be holding steady, with observations at the same frequency as 2003.

Partners include: National Institute of Forests, National Council of Protected Areas, Defensores de la Naturaleza, municipalities, and The Nature Conservancy.

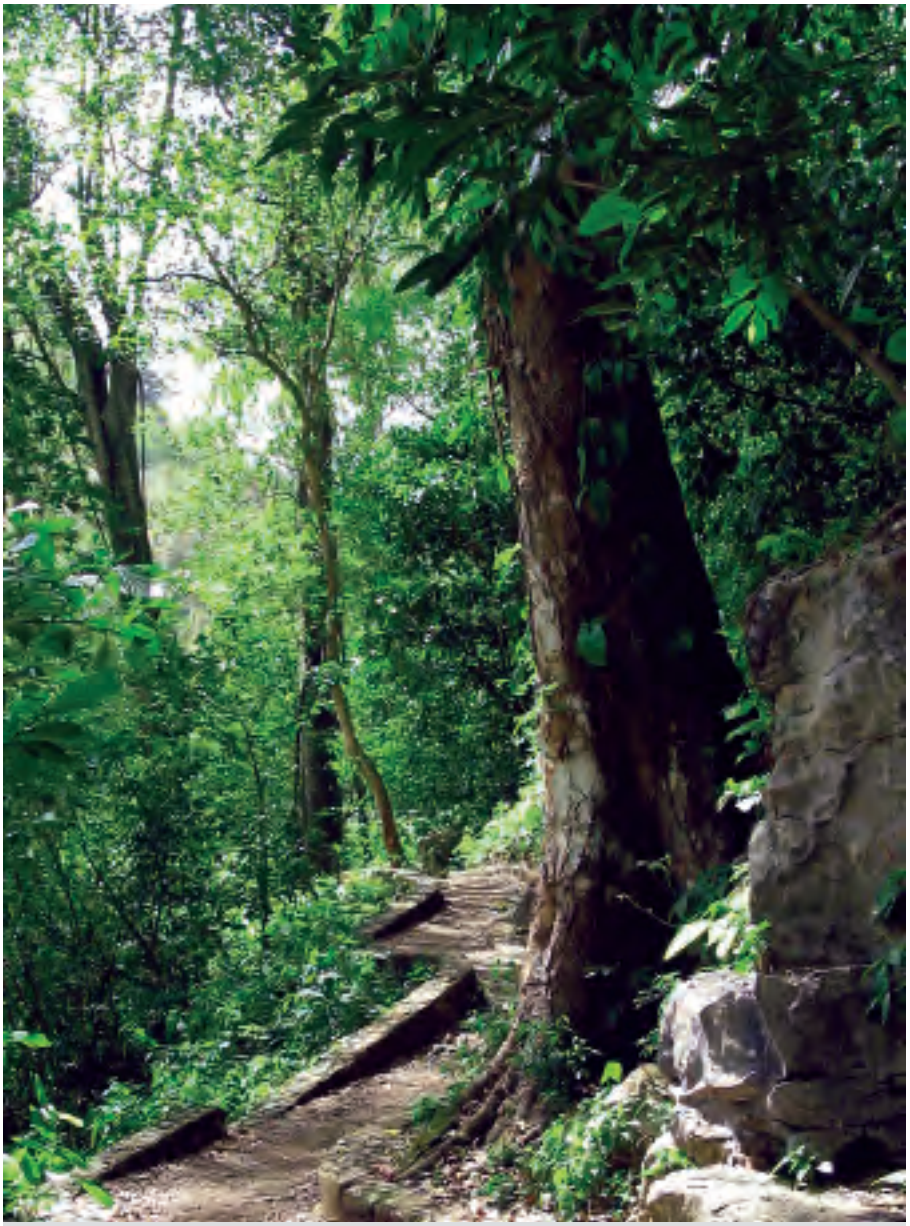
Honduras

Improved Management of Watersheds, Forests, and Protected Areas

FY 2004 Obligation: $2.105 million (DA)

USAID's environment activities in Honduras have contributed to the sustainable management of watersheds, forests, and protected areas since 1998. By helping the public and private sector organizations of Honduras develop the capacity and commitment to properly manage Honduras' protected areas and forests, USAID hopes to prevent and mitigate the damage done by environmental disasters such as Hurricane Mitch.

In FY 2004, the Agency focused on conserving water and biological resources in drought-stricken areas of Honduras through community-based development programs. USAID supported the protection and management of the Choluteca Watershed, focusing on the 23,165 hectares of protected lands in the El Jicarito, Berberia, and San Bernardo Species Habitat Reserves. USAID worked with municipal governments and local water boards to halt deforestation within and around the protected areas. Agroforestry and sustainable hillside agricultural practices were promoted as an alternative to shifting agriculture in buffer zones around the habitat reserves. An environmental education component promoted increased awareness among school children and the overall population.



STEVEN SWIERENGA

SIERRA DE AGALTA PROTECTED AREA, HONDURAS: Improved management of Honduras' protected areas and forests can reduce the impacts of natural disasters like hurricanes and droughts by regulating water flow and providing natural buffer zones.

In close cooperation with the Peace Corps and two highly motivated volunteers, USAID supported the development and production of a cloud forest plant guide for the Sierra de Agalta protected area in the region of Olancho — the first ever created for Honduras. Experts in the field have labeled this guide a

"necessity" for Honduras and a "very professional piece of scientific work." Honduras has 31 cloud forests, which cover approximately 90,000 hectares of land area in the country. Cloud forests represent some of the most biologically balanced, virgin areas as they remain the last areas in the country not fully encroached by human development. This guide is a technical reference for researchers and students to raise awareness about the importance of biological diversity, and it will serve as a baseline document for future biodiversity inventories.

Partners include: PanAmerican Agricultural University at El Zamorano, the National Forest Management Agency (COHDEFOR), and the U.S. Peace Corps.

Mexico

Conservation and Sustainable Natural Resource Management in Targeted Watersheds

FY 2004 Obligation: $4.184 million (DA)

Mexico is ranked as the fourth most biodiverse country in the world. More than 30 percent of its species are endemic. USAID's overall environment program in Mexico focuses on improving the conservation and management of natural resources by assisting local people to participate in the implementation of conservation and more sustainable use of their land, developing and promoting adoption of technologies that are economically viable and ecologically sound, and improving the national enabling environment to support better practices and more local participation.

In FY 2004, USAID completed several activities under its former strategy while jump-starting its new program that will integrate conservation and management of natural resources and energy in targeted watersheds. As part of the Agency's new strategic approach, work began in four watershed areas of valuable biodiversity where local people suffer from high rates of poverty and marginalization: the middle Usumacinta (Chiapas), the Pacific Coast (Chiapas), the Chimalapas (Oaxaca) and the Sierra Tarahumara (Chihuahua).

At the World Parks Congress in 2003, the Government of Mexico reaffirmed its commitment to support the conservation of its incredible biodiversity by supporting the "Global Programme of Action on Protected Areas," which calls upon participant nations to establish and strengthen national and regional systems of protected areas. In partnership with TNC, USAID has redirected efforts and funding for several eco-regional planning processes under the Parks in Peril program to help support the efforts of Mexico's Protected Area Commission and the Commission on Biodiversity Use and Knowledge to complete a nationwide protected ecosystem gap analysis.

USAID supported continued work toward the consolidation of the protected area Cuatro Cienégas. This is one of 11 protected areas (totaling more than 2.3 million hectares) that built management capacity, infrastructure, and financial planning capabilities with USAID assistance. The Agency also completed work in the Sierra Norte (La Chinantla Alta) of the State of Oaxaca that helped four communities develop overall land-use plans that integrate details such as zoning for restoration, wood collection, and sustainable forest management practices, as well as defining community conservation areas (10,789 hectares).

In this final year of the small grants program for the Selva Maya, communities and local NGOs completed projects that added to basic information on key species to aid management planning, and joined together to coordinate activities such as ecotourism. In addition, USAID's Wildfire Prevention and Restoration Program completed its work to involve local communities and NGOs to reduce the impact of fires in and around 11 protected areas in Mexico.

Under USAID's work in targeted watersheds, USAID partner The Nature Conservancy is building on previous work that consolidated the management in two key protected areas, El Triunfo and La Encrucijada. The new Chiapas Coast Program works with the municipalities in the watershed that links these two biodiverse areas to define and implement activities that will support economic alternatives and reduce watershed degradation.

In the middle Usumacinta site in Chiapas, USAID partner Conservation International is helping several indigenous communities identify economic alternatives and support a multi-institutional planning process for the region, reducing the ecological threat of growing tourism while enabling economic growth.

USAID partner WWF's two new sites, the Chimalapas in Oaxaca and the Sierra Tarahumara in Chihauhua, combine very high

biodiversity with marginalized indigenous populations who own and manage the land. In the Tarahumara, two of the four targeted communities have developed community action plans for conservation and development. In the Chimalapas, the two municipalities have produced zoning plans, and Santa María Chimalapas has received recognition from the National Commission on Protected Areas for its 2,000-hectare community protected area. WWF is developing a publicly available Geographic Information System (GIS) that combines data on conservation, land use, economic, social, and other factors for government and local use in planning.

Partners include: The Nature Conservancy, World Wildlife Fund, the Fondo Mexicana para la Conservación de la Naturaleza, Conservation International, Pronatura, Comisión Nacional de Áreas Naturales Protegidas.

Nicaragua

Natural Resources Management Program

FY 2004 Obligation: $1.0 million (DA)

Part of the Mesoamerican biological corridor, Nicaragua contains extensive tropical forest, marine, and freshwater resources that provide significant benefits to its people. Yet Nicaragua is highly vulnerable to natural disasters that have caused inordinately high loss of life and damage to the economy during the past 30 years. USAID's five-year country plan for

CITLALI CORTÉS, WWF

CHILDREN IN THE SIERRA TARAHUMARA, MEXICO: These school children belong to the Rarámuri indigenous community. Long disadvantaged in Mexican society, the Rarámuri are gaining management control and benefits through community conservation of nearby oak and fir forests, with USAID support.

Nicaragua, released at the beginning of FY 2004, has prioritized the development and improvement of management systems that conserve natural resources and contribute to competitive, market-oriented enterprises that are consistent with conservation goals.

In FY 2004, USAID continued support to the Co-management of Protected Areas project, which focuses on empowering local NGOs and communities to co-manage six protected areas through agreements with the Ministry of Environment and Natural Resources. By working together, the Government of Nicaragua and civil society are exploring new ways to improve natural resources management, preserve biodiversity, and help communities develop economic opportunities.

During the past year, six protected areas began to implement management plans developed in FY 2003. These protected areas are being co-managed by Nicaraguan NGOs that received institutional strengthening and financial management training with USAID support. The new management plans will improve the administration and maintenance of the parks. The investment made in the organizational capacity of these partner NGOs is paying off as well, as they are now working effectively with other Nicaraguan and foreign NGOs, and signing alliances with universities to conduct scientific research. Areas of new research include conducting an inventory of bromeliad and orchids, and a study on species of birds in the Natural Reserve Tisey-Estanzuela. Biological monitoring is also being conducted in the Natural Reserve Volcan Cosiguina.

The capacity building for protected area financial management extended beyond the six protected areas directly involved in the Co-management of Protected Areas project. USAID supported an effort to identify alternative financing and to sustain the entire National System of Protected Areas. This is especially challenging as most of the protected areas in the national system are not public lands. The management of each of these areas requires collaboration among a broad array of stakeholders with diverse interests, including community groups, small- and large-scale land owners, and other resource users. The Superior Council for Private Enterprise has also been involved to help develop a private-sector sponsorship program for the protected areas.

USAID conducted a sustainable tourism workshop with 22 U.S. Peace Corps volunteers and representatives from seven NGOs. Sites for the implementation of tourism activities were identified and prioritized for FY 2005.

Finally, in FY 2004 USAID supported development of sustainable forestry certification of harvesting and management of natural forests, particularly by communities. Certification includes conducting an environmental impact assessment and detailed plans for protecting and monitoring biodiversity in the forest. The project also helps link certified producers to international markets so that there are economic incentives to manage Nicaragua's forests in a manner that benefits biodiversity.

Partners include: Government of Nicaragua: Environment and Natural Resources Ministry (MARENA), The Nature Conservancy, local NGOs SELVA (La Asociación somos Ecologistas en Lucha por la Vida y el Ambiente), FIDER (Fundación de Investigación y Desarrollo Rural), LIDER (Fundación Luchadores Integrados al Desarrollo de la Región), and FUNDENIC (Fundación Nicaraguense para el Desarrollo Sostenible).

Panama

Improved Sustainable Management of Natural Resources and Biodiversity Conservation

FY 2004 Obligation: $5.072 million (DA)

The Panama Canal Watershed provides a particularly valuable environmental service, regulating and purifying the water that flows into the Panama Canal. The sustainable management of the forests, lakes, and streams that constitute the watershed is therefore essential to ensure the health of Panama's biodiversity and maintain the efficient operation of the Canal. USAID uses an integrated approach to watershed management through assistance in environmentally sound agricultural practices, wastewater management, clean industrial production, sustainable forestry, and cattle ranching.

In FY 2004, four pilot sustainable agriculture demonstration activities showed how to improve the quality of aquatic ecosystems by reducing siltation from soil erosion and reducing use of agrochemicals. USAID also supported dissemination of cattle ranching best practices, including improved pastures and the incorporation of

PANAMA CANAL AUTHORITY

PANAMA CANAL: The flow of the Panama canal, which carries 40 percent of U.S. international trade, depends on an abundant supply of fresh water from surrounding hills. USAID works to preserve protected areas that harbor high biodiversity and also provide a steady stream of fresh water.

trees. With USAID assistance, a policy reform proposal for sustainable cattle ranching was developed and vetted by a panel of experts for submission to the Inter-Institutional Commission for the Canal Watershed. One expected effect of this policy reform is the natural regeneration of plant species on marginal lands taken out of production, which would also afford a more welcoming habitat for native fauna. USAID is also working with the National Environmental Authority to reform the National Forestry Law so that it better addresses topics like community forestry and forest certification.

USAID funded five activities in the water and sanitation sectors in FY 2004 benefiting more than 7,000 people in 50 communities. Water supply and sanitation infrastructure was built and local governance was strengthened by improving the capacities of local water, health, and environmental organizations and by strengthening their relationships with local and national authorities. Residual waters are the main contributor to the eutrophication of Gatun Lake and the deterioration of water quality for human consumption. USAID is also working with the Ministry of Public Works in rural road rehabilitation best practices to avoid erosion and stream pollution.

To ensure sustainability and scaling up of USAID-funded watershed management demonstration activities, a $5 million Incentive Fund to finance demonstration activities in pilot sub-watersheds became fully operational in FY 2004. The Panama Canal Authority is ready to disburse funds after signing a management contract with a local NGO to administer the Authority's $2.5 million contribution to the Fund; the USAID contribution is administered by the Mission's prime technical assistance contractor, Academy for Educational Development. To reach this point, a transparent selection process that included instruction and implementation manuals and methods was developed with USAID assistance and adopted by the Panama Canal Authority.

In addition to sub-watershed pilot projects, USAID supported improved governance of the Panama Canal Watershed by promoting policy reforms at the national level, helping develop sound policies at the local level, and working to generate stable funding sources for protected areas. For example, the Chagres Fund, capitalized by the $10 million "debt-for-nature" swap that USAID facilitated under the Tropical Forest Conservation Act in FY 2003, is now operational. The Fund is hiring new personnel to protect the Chagres National Park and improve the infrastructure of the park, which provides 50 percent of the water for Canal operation and 50 percent of the water for human consumption in Panama; the park also contains high levels of biodiversity, such as endemic epiphytes and birds. The Fund complements other efforts underway with USAID funding, such as the Parks in Peril program. USAID is working with the National Environmental Authority and the Panama Canal Authority to develop a pilot project for environmental fee for services that could be replicated in other parts of the watershed, if successful.

USAID is breaking new ground with the traditionally highly centralized Government of Panama by introducing watershed management concepts and field

interventions with local government institutions and participatory community groups. With USAID as a catalyst, the National Environmental Authority, environmental NGOs, and community members agreed on a co-management scheme for the Chagres National Park. This represents a major institutional change in the National Environmental Authority. Conceptual frameworks have been put in place that will allow Soberanía National Park to be developed for sustainable tourism activities. With USAID funding, a draft decree was prepared to regulate concessions in protected areas that will set the stage for private ecotourism investment.

USAID also catalyzed a strategic alliance with the National Council of Private Business and the Department of Environmental Quality in the National Environmental Authority to establish a Cleaner Production Center. Its focus is on small- and medium-sized enterprises and

Box 7. Conserving the Habitat of Neotropical Raptors

The USAID-funded Peregrine Fund activity aims to conserve neotropical raptors and their habitats through research, conservation interventions, public education, and development of local capacity for science and conservation.

The project has six components but most resources are dedicated to the Neotropical Raptor Conservation Center located in Panama, where harpy eagles are reproduced in captivity. The release of independent harpies born in captivity into natural habitats in Bocas del Toro, Panama and Rio Bravo, Belize was a program highlight in FY 2004, as was the para-biologist training of members of indigenous communities located in areas where harpies have their nests.

The Peregrine Fund supports the establishment of a neotropical raptor network for scientists and researchers around the world.

ANGEL MUELA, THE PEREGRINE FUND

HARPY EAGLE: Panama's national bird, the Harpy eagle, weighs up to 20 pounds, has a seven foot wing span, and talons as large as grizzly bear claws. Through The Peregrine Fund, USAID helps breed the eagle in captivity and relocate adolescents to remote areas of Panama where suitable forest habitat still exists.

production facilities that pollute the rivers and lakes in the Panama Canal Watershed. Because industries along the Transisthmian Highway within the Panama Canal Watershed account for some of the greatest threats to biodiversity, USAID's clean production activities focus on those industrial sectors.

USAID is working with the National Environmental Authority, the National Tourism Institute, and the private sector to promote ecotourism in National Parks within the Panama Canal Watershed to generate additional income for park management and to better protect biodiversity.

Partners include: Asociación Nacional para la Conservación de la Naturaleza (ANCON), Sociedad Nacional para el Desarrollo de Empresas y Áreas Rurales (SONDEAR), Centro de Estudios Sociales y Accion de Panama (CEASPA), Fundacion Avifauna, Fondo Peregrino/Panama, The Nature Conservancy, National Environmental Authority (ANAM) and the Panama Canal Authority (ACP), Agricultural Development Bank (BDA), and Interinstitutional Committee for the Watershed (CICH).

Paraguay

Management of Globally Important Ecoregions

FY 2004 Obligation: $0.938 million (DA)

USAID's environment program in Paraguay continues working to improve the management of globally important ecoregions such as the Atlantic rain forest, the Chaco forest, and the Pantanal wetlands. Activities are coordinated with efforts in Argentina, Bolivia, and Brazil with whom Paraguay shares these eco-regions.

UWE KURTH, USAID/PARAGUAY

PARAGUAY PRIVATE RESERVES: The "Mbatovi" Private Ecological Reserve in the Atlantic forest is a key building block in landscape-level conservation because it complements publicly-owned protected areas.

The Pantanal is the world's largest freshwater wetland system, containing the greatest concentration of fauna in the Americas. In the Pantanal ecoregion in FY 2004, USAID supported the training of local guides to improve their ability to interact with tourists. An NGO and a committee were formed to provide a legal basis for tourism development activities. As a result, tourism quality and quantity improved.

USAID also supported the capacity building of local stakeholders to properly manage the Pantanal. One biodiversity issue they may address is restoration of the Paraguay River fishery. An assessment of fish population and diversity showed that the most valuable species are drastically declining as a result of commercial fishing. In the coming year, USAID partner DeSdelChaco Foundation plans to promote fish breeding in floating cages next to the river for commercial purposes. This should reduce catch of wild fish in the river, allowing their populations to recover.

One of the priorities of the Agency's environmental program is to develop the capacity of local NGOs to become an active part of civil society by proactively partnering with local governments in the protection and adequate management of natural resources. NGOs worked with the Government of Paraguay to consult the public and develop procedure manuals and departmental plans that identify the main environmental topics and regions to be addressed by governorships and municipalities.

USAID also helped build capacity in the legal area by providing access to information and training to local

justices and prosecutors. A field manual for prosecutors focused on environmental legislation was developed with local partner Instituto de Derecho y Economia Ambiental. The manual was widely appreciated and used as a main source of reference by the prosecutors.

In FY 2004, a high profile Social Pact, led by the Paraguayan Vice-President, was signed by many important stakeholders including the Government of Paraguay, the private sector, and NGOs. The pact lays out a plan for decreasing land conversion from forests to cropland and pastures. USAID helped make sure that the Social Pact included a wide range of stakeholders. In addition, USAID supported activities that led to almost 125,000 hectares of protected areas being placed under improved management, much under conservation easement. USAID promoted easements as a more flexible option for landowners who did not want to use the very strict Natural Private Reserve instrument.

USAID provided support in FY 2004 to WWF to help with the law "Deforestation 0." The law was approved by the congress for the eastern region of the country and an audit of all the forestry exploitation plans was started by the local Environment Secretariat. As a result, all forest exploitation activities will not be permitted for two years until the regularization process is completed. So far almost 90 percent of the documentation was found to be irregular, and now the Secretariat is urging the owners to update their plans and compensate for the damage caused. This activity is part of the Biological Vision for the Upper Paraná Atlantic Forest which includes conservation actions in Brazil, Argentina and Paraguay.

In FY 2004, USAID supported DeSdelChaco Foundation as it worked to have the "Gran Chaco Biosphere Reserve" declared part of the Man and the Biosphere Program of UNESCO. This will be the largest area in the country to be named as an international conservation area; by the end of FY 2004, the documentation was in its final stages of completion.

Partners include: Instituto de Derecho y Economia Ambiental, DesdelChaco, World Wildlife Fund, the Moises Bertoni Foundation, and The Nature Conservancy.

Peru

Strengthened Environmental Management to Address Priority Problems

FY 2004 Obligation: $2.4 million (DA)

USAID works with the Government of Peru to conserve Peru's natural resources by strengthening national environmental policies and the national protected areas system. The Agency supports Peru's efforts to improve and strengthen local governments and communities to address key environmental issues and increase the knowledge of environmental problems and public demand to address them. These efforts promote the sustainable use and protection of natural resources, enhancing Peru's potential to attract investment and generate jobs and income.

Peru's National Institute for Natural Resources' (INRENA) protected areas system covers 13 percent of the national territory. However one-third of these protected areas lack clearly defined status because of weaknesses in the Natural Protected Areas Law and Regulations. In FY 2004, with USAID support, INRENA developed guidelines and procedures to establish Natural Protected Areas at the national, regional, municipal, and private levels. INRENA also established guidelines for the definitive categorization of Reserved Zones, a temporary Natural Protected Area category for those areas that lack final definition within the protected area system, and prepared guidelines for the preparation of contracts for private use and management of renewable natural resources within the Natural Protected Areas. Finally, USAID also worked with INRENA to draft a law on violations and sanctions in Natural Protected Areas.

The Natural Protected Area Law of Peru permits private administration of national natural protected areas under the supervision of INRENA. During FY 2004, The Field Museum of Chicago strengthened the capacity of INRENA to oversee private administration plans. A successful proposal for the private management of the Cordillera Azul National Park by a consortium of local NGOs was developed. The Field Museum of Chicago and CIMA, a Peruvian conservation organization, are now developing a comprehensive management plan for the park and its buffer zone, training park guards, and engaging neighboring communities in creating and implementing the plan. Illegal

forest camps have been eliminated through coordination and actions lead by INRENA park guards and local management committees supported by CIMA.

In addition, the work in Pacaya-Samiria and Central Selva National Parks by the Parks in Peril program has strengthened local management committees and provided support to monitor biodiversity health in order to eliminate illegal logging and stabilize local settlements.

In FY 2004, USAID also supported development of conservation strategies to manage natural resources in a sustainable manner and promote legal economic alternatives in protected areas' buffer zones. In the Cordillera Azul National Park Buffer Zone, USAID partner Field Museum of Chicago has implemented agroforestry programs in 7,000 hectares of local community lands through subcontracts with local NGOs. In these lands, assistance is provided to help chacras (farmsteads) grow a more diverse set of plants including annual crop species, medicinal plants, fruit and forest species, and vegetables. As a result, family income has improved by 13 percent from sales of agroforestry products. Also, in the Pacaya-Samiria Reserve, the Parks in Peril program has supported the development of the first fish management plan that was approved at a national level. These economic growth strategies near protected areas have played a central role in the difficult recovery of the Huallaga and Ucayali Valleys from illegal land uses like coca and poppy production that have destabilized the region.

Partners include: The Nature Conservancy, International Resources Group, World Wildlife Fund, the National Institute for Natural Resources, and National Natural Resources Management Agency of Peru.

MATT HERRICK, CHEMONICS

PERUVIAN WETLANDS: Paddling through wetlands, these community members benefit from a healthy ecosystem which provides fish, water, and wild vegetables.

CENTRALLY FUNDED PROGRAMS

EGAT/NRM/ Biodiversity Team

Global Biodiversity Conservation

FY 2004 Obligation: $6.2 million (DA)

USAID's Biodiversity Team, which is housed in the Economic Growth Agriculture and Trade (EGAT) Bureau's Office of Natural Resources Management, promotes the conservation of globally significant biodiversity through improved management of biologically rich landscapes and seascapes. The Biodiversity Team provides technical leadership for the Agency and offers USAID missions and bureaus in-house support for conservation strategy formulation, program design, implementation, and evaluation.

AWF

KILIMANJARO HEARTLAND: A ranger fills out an elephant monitoring form near Mt. Kilimanjaro as part of USAID partner African Wildlife Foundation's (AWF) wildlife conservation efforts. AWF focuses on large African landscapes of exceptional wildlife and natural value, called "heartlands," and develops strategies to protect and maintain biodiversity while meeting human needs and aspirations.

For example, in FY 2004 the Biodiversity Team helped the Belize Mission and USAID's Latin America and the Caribbean Bureau design and launch an alliance and suite of activities to conserve the Mesoamerican Reef, the largest barrier coral reef system in the Western Hemisphere. This work is encouraging the adoption of better practices in the areas of fisheries, tourism, and agriculture.

In Africa, the Biodiversity Team helped coordinate a joint review of U.S. Government investments in gorilla conservation in Central Africa. Working with mission staff, the U.S. State Department, and the U.S. Fish and Wildlife Service, the team evaluated progress, identified opportunities for leverage and collaboration, and developed new strategies to conserve gorillas and their habitats.

In another example, also in Africa, a wildlife ecologist from the Biodiversity Team provided technical support for the Kenya Mission's assessment of the wildlife sector in Kenya. Follow-on work included examining USAID's comparative advantage in the sector and helping the Mission create its framework for future wildlife-based activities.

The Global Conservation Program

The Biodiversity Team manages and funds the Global Conservation Program (GCP), a partnership with six U.S.-based conservation organizations: African Wildlife Foundation (AWF), Conservation International, Enterprise Works Worldwide, The Nature Conservancy, Wildlife Conservation Society, and World Wildlife Fund. In its second phase, which began in FY 2003, GCP partners implement conservation projects at 17 sites identified as global priorities for *in-situ* conservation.

In Indonesia, The Nature Conservancy and its local partners are strengthening the management capacity of Wakatobi Marine National Park. This archipelago lies at the southern tip of the island of Sulawesi and is one of the highest priorities for marine conservation in Indonesia in terms of diversity of marine life and reef condition. The main components of the program are management planning and design, and monitoring and patrolling for biodiversity protection; this includes reducing destructive fishing practices in the park. In FY 2004, a site assessment was completed, detailing resource status, resource-use patterns, and socioeconomic management needs. Fishing surveillance and enforcement procedures for the entire park were established and communicated to stakeholders. The goal is to have the park provide a solid foundation for local livelihoods through biodiversity conservation, enhanced fisheries, and expanded employment opportunities in tourism and other industries.

AWF implements integrated conservation and development programs within three broad landscapes called "heartlands." In the Kilimanjaro Heartland surrounding Africa's highest peak and most recognized symbol, Mt. Kilimanjaro, AWF is achieving successes on the ground and in policy work. In FY 2004, it helped demarcate the Kitenden Wildlife Corridor as an official wildlife migration route and critical link between Amboseli and Kilimanjaro National Parks and continues to work closely with the communities who have set this land aside, holding discussions to minimize the impacts of human-wildlife conflicts.

Moreover, AWF also enjoyed a significant policy success last year with the formal recognition and establishment of wildlife management areas under the wildlife policy of the Government of Tanzania. This policy should extend greater wildlife management rights to local communities, who will now be able to form institutions for wildlife management and enter into direct contracts with private-sector tourism and hunting operators.

In FY 2004, in what is perhaps the largest remaining swath of ecologically functional temperate grassland in the world, Wildlife Conservation Society worked with Mongolian local partners to identify and address conservation threats and opportunities. In its first year, this program conducted a threats assessment and a protected areas needs assessment, conducted Mongolian gazelle research and three bird area surveys, collected and developed spatial information on threats to the Eastern Steppe environment, started a monthly conservation information and networking service, and presented management recommendations to

Box 8. Sites Supported under GCP II

Primarily Marine

- East African Marine Ecoregion: Kenya, Tanzania, Mozambique
- Glover's Reef Living Seascape, Belize
- Kimbe Bay, Papua New Guinea
- Mesoamerican Reef: Belize, Guatemala, Honduras, Mexico
- Raja Ampat Islands, Indonesia
- Wakatobi National Park, Indonesia

Primarily Terrestrial

- Eastern Himalayas/ Terai Arc Landscape, Nepal
- Forests of Lower Mekong: Vietnam, Cambodia, Laos
- Forests of Sierra Madre and the Palawan, the Philippines
- Kilimanjaro Heartland: Kenya, Tanzania
- Maasai Steppe Heartland, Tanzania
- Madidi Living Landscape, Northwest Andes, Bolivia
- Maya Biosphere Reserve Living Landscape, Guatemala
- Samburu Heartland, Kenya
- The Cerrado-Pantanal Biodiversity Corridor, Brazil
- The Eastern Steppe Living Landscape, Mongolia
- The Menabe Biodiversity Corridor, Madagascar

the national government on key species such as the Mongolian gazelle and Brandt's vole.

In addition to site-based activities, GCP incorporates a learning component for applied research and dialogue on topics of broad conservation interest. In FY 2004, three learning groups were formed on tropical marine conservation, landscape scale conservation planning, and socioeconomic factors in conservation. The learning component embodies the larger GCP objective of developing and promoting cutting edge approaches that advance the state of conservation science and application by targeting global conservation priorities. While GCP represents a relatively small amount of the total budget that USAID spends on biodiversity conservation, it is uniquely placed to have impacts within the Agency and beyond.

Cross-Sector Partnerships for Biodiversity Conservation

In FY 2004, the Biodiversity Team launched a new program, Cross-sector Partnerships for Biodiversity Conservation. The program seeks sustainable biodiversity conservation results through partnerships that focus on the development of innovative knowledge, skills, activities, tools, and approaches addressing multi-sector threats and opportunities.

One award went to the University of Rhode Island's Coastal Resources Center. Its Population, Equity, AIDS, Conservation and Environment (PEACE) program demonstrates how HIV/AIDS, gender and human population interventions can be effectively integrated into local coastal zone management programs to achieve better conservation and human livelihood outcomes in coastal Tanzania (also described under the Tanzania country program, page 30).

A second award was made to World Wildlife Fund to promote new long line fishing gear in the pacific fishing fleets of Mexico, Peru, Indonesia and the Philippines. WWF promoted widespread introduction and use of new technologies, such as circle hooks, and the creation of an enabling policy environment. Ultimately this should result in maintenance of target fish species catch while dramatically reducing sea turtle bycatch.

Partners include: African Wildlife Foundation, Conservation International, Enterprise Works Worldwide, The Nature Conservancy, Wildlife Conservation Society, World Wildlife Fund, and many local NGOs and partner governments.

EGAT/NRM/ Forestry Team

Sustainable Forest Management

FY 2004 Obligation: $3.933 million (DA)

The Office of Natural Resources Management's Forestry Team promotes the protection and sustainable management of forests around the world. Forest protection and biodiversity conservation are inextricably linked through forests' role as a primary habitat for many flora and fauna species. USAID forestry programs reflect this and promote better forest management in areas with high rates of biodiversity. For example, USAID's CARPE program aims to protect forests in the Congo and the endangered species that inhabit

MIOMBO FORESTS: This brachystegia woodland in northern Malawi is home to a wide variety of birdlife. These woodlands are part of the larger Miombo ecoregion, an extensive area of dry forests in the Central African plateau that is receiving increasing attention for its biodiversity and livelihood values.

them, such as mountain gorillas. With biodiversity conservation as an explicit goal, CARPE hopes to slow forest degradation while implementing other conservation measures such as controlling animal poaching and reducing the bushmeat trade (the over-hunting of wild animals for food) to avoid the "empty forest syndrome" in the region, in which the trees are largely intact but the fauna are dramatically depleted.

The Forestry Team supported three major field-based activities in FY 2004. The Sustainable Forest Products Global Alliance is a public/private partnership that advances a new model for forest conservation and community development to reward sustainable forest management in the global marketplace. The Global Alliance is anchored by USAID's Forestry Team and NGO partners Metafore and WWF. USAID provides country knowledge and technical support to Global Alliance activities. WWF, through its Global Forest and Trade Network, creates networks of suppliers in developing countries, and buyers in consuming nations, with a commitment to the production and trade of responsible forest products. Metafore works to increase the demand for products from well-managed forests around the world by catalyzing change in the way that companies based in the developed world think about, specify, purchase, and use wood and paper products.

The efforts of the Global Alliance are resulting in forest conservation and biodiversity protection on the ground. The widespread commitment to the Alliance objectives are illustrated by the three to one match provided by the private sector. For example, in FY 2004, WWF helped two of its partners, Office Depot and Staples, to use their purchasing power to halt the destruction of key elephant and tiger habitats in the Tesso Nilo landscape in Indonesia through direct pressure on the global supply chain. WWF's Global Forest Trade Network has grown to 366 buyers. These buyers have committed to responsible purchasing of forest products from legal, well-managed forests.

The Forestry Team also works with the USDA Forest Service through an interagency agreement to conserve forests around the world. In FY 2004, the USDA Forest Service's partnership with USAID helped conserve forest biodiversity by promoting improved park management, reduced impact logging, forest-fire management, landscape planning and management, and watershed protection.

For example, in FY 2004, the Forest Service worked with USAID partners to develop park management plans and GIS maps in Gabon. The new park management plans in Gabon will serve as a guide for the nation's newly created national parks, where researchers have identified more than 159 reptile and amphibian species, 70 freshwater fish species, and 140 tree species.

In Bolivia, the USDA Forest Service is providing technical assistance to improve forest management and wood processing and link certified forest products to buyers in the international market.

In Asia, the Forest Service is training foresters to use a software package it has developed that will enable Asian foresters to compare the cost of reduced impact logging to conventional logging practices and learn how they can reduce the environmental impact of forestry operations while maintaining profitability.

USAID also provides valuable technical and field experience to the President's Initiative Against Illegal Logging. Illegal logging causes environmental damage and biodiversity loss, undermines sustainable forest management, and jeopardizes the livelihoods of forest-dependent people. Led by the U.S. Department of State, this Initiative helps developing countries in their efforts to combat illegal logging and corruption in the forest sector.

The Initiative addresses illegal logging by harnessing market forces, enhancing community involvement in forest governance, promoting technologies for forest monitoring, and strengthening the rule of law. For example, USAID's partners in Indonesia have negotiated with logging concessionaires who have agreed to set aside large tracts of their concession areas for conservation and practice reduced-impact logging techniques in remaining areas to minimize the impact on habitat and wild orangutan populations. USAID activities constitute more than 90 percent of the FY 2004 budget for this Initiative.

Partners include: USDA Forest Service, World Wildlife Fund, Metafore, and many businesses such as The Home Depot and Staples.

EGAT/NRM/ Water Team

Coastal, Marine, Freshwater, and Aquaculture Management

FY 2004 Obligation: $2.016 million (DA)

USAID promotes integrated water and coastal resources management through efforts coordinated by the Office of Natural Resources Management's Water Team. The principles and practices of integrated water resources management and integrated coastal management are promoted in several key countries and all regions worldwide. These approaches address biodiversity conservation needs through planning and management efforts at the ecosystem or basin-scale, and include biodiversity of freshwater, estuarine, and marine systems.

In FY 2004, the Water Team initiated two new programs to promote the integrated management of coastal and freshwater systems: Sustainable Coastal Communities and Ecosystems (SUCCESS) and Global Water for Sustainability (GLOWS).

SUCCESS works with institutions and people to improve their well-being by promoting healthy coastal ecosystems and sustainable resource management through good governance. The program is initiating pilot activities in Ecuador, Nicaragua, and Tanzania. The consortium includes the Coastal Resources Center (University of Rhode Island), Pacific Aquaculture and Coastal Resources Center (University of Hawaii at Hilo), The Nature Conservancy, WWF, Conservation International, and National Sea Grant Program.

THE NATURE CONSERVANCY

TRAGEDY OF THE COMMONS: Through a role-play exercise, school teachers and regional government officials in Raja Ampat, Indonesia learn what happens to fish stocks when everyone can catch all they want. Their lessons will be incorporated into school curricula.

SUCCESS will collaborate with the Western Indian Ocean Marine Science Association, EcoCostas, and other local organizations, to foster sustainability of coastal governance efforts by promoting regional learning networks and training programs for coastal management professionals.

GLOWS promotes the integrated management of water resources and aquatic ecosystems to simultaneously maximize the economic and social benefits derived from water resources while sustaining freshwater ecosystems. Working at a basin, watershed, or aquifer scale, GLOWS provides expertise across the policy, governance, institutional, educational, and technical dimensions of integrated water resources management. Approaches combine advanced analytical techniques, innovative mechanisms for sustainable resource management and biodiversity conservation, community-based programs in poverty alleviation, improved sanitation and potable water supply, and global networking of local NGOs to achieve integrated water resource management objectives. The consortium includes the Institute for Sustainability Science (Florida International University), World Vision, LakeNet, and Amizade. Pilot projects in Peru and a transboundary basin of Tanzania and Kenya are designed to be proving grounds for new technical, economic, organizational, and political approaches to integrated water resources management in selected river basins.

The increasing global demand for freshwater is placing additional threats on freshwater biodiversity. Almost 90 percent of the Earth's

surface (non-frozen) freshwater is contained in the world's lakes and reservoirs. In FY 2004 USAID supported an alliance to improve lake and reservoir basin management by establishing an international network of lake basin managers for increased awareness and exchange of information, developing and disseminating best management practices, designing lake basin management tools and improved global access to these tools, and providing technical assistance for capacity building in select lake basin communities and countries. Partners included LakeNet, the International Lake Environment Committee, the Japanese Prefecture of Shiga, the World Bank, the Global Environment Facility, and lake managers and researchers from more than 25 countries.

In four countries — Armenia, Ethiopia, Kyrgyzstan, and Nicaragua — the technical assistance activities focused on a specific lake basin, and included training workshops or local projects to demonstrate lake management techniques. These lakes have been identified as global, regional, or national priorities. For example, located at the headwaters of the Blue Nile, Lake Tana is of strategic importance for water management in Ethiopia and for downstream neighbors in the Nile Basin. Lake Tana is also one of 250 lakes identified by LakeNet as having globally significant biodiversity. With USAID support, the first-ever national lake symposium in Ethiopia was organized, and management capacity increased in the Lake Tana watershed.
In the three Asian countries — India, Indonesia, and the Philippines — technical assistance activities focused on building national learning networks of lake basin management practitioners. On the international level, a major outcome of the project was increased recognition of the importance of lakes to freshwater biodiversity and water resources, as reflected in global water policy statements.

Partners include: LakeNet, Saint Michael's College University of Rhode Island — Coastal Resources Center, University of Hawaii at Hilo — Pacific Aquaculture and Coastal Resources Center, U.S. Sea Grant Program — NOAA, The Nature Conservancy, Conservation International, WWF, Western Indian Ocean Marine Science Association, EcoCostas, Florida International University's Institute for Sustainability Science, World Vision, and Amizade.

EGAT/NRM/ Land Resources Management Team

Environmental Governance, GreenCOM, FRAME

FY 2004 Obligation: $1.6 million (DA)

USAID has been a consistent leader in recognizing and promoting the role that the rural poor can and must play in protecting biodiversity. By supporting sustainable land management practices, the Agency is improving human livelihoods as well as conservation approaches. The Land Resources Management (LRM) Team's portfolio of programs in policy reform, scientific research, education, governance, small-holder enterprise development, and trade incentives promotes economically competitive, sustainable land management practices that enhance biodiversity conservation. In addition to the programs described below, the LRM Team co-manages two Collaborative Research Support Programs (CRSP) that are significant for biodiversity conservation: the Sustainable Agriculture and Natural Resource Management (SANREM) CRSP and the Integrated Pest Management CRSP, described in the EGAT/Agriculture section.

The LRM Team supports GreenCOM, USAID's global environmental education and communications project. Working in concert with a wide variety of local and national partners, GreenCOM facilitates the adoption of improved conservation practices through training and capacity building, partnership development, public campaigns to motivate positive action, and advocacy and outreach to improve policies. In FY 2004 GreenCOM's country-specific biodiversity conservation activities included watershed management in Panama, sustainable forestry in Indonesia, coastal resource and park management in Tanzania, and marine conservation in Egypt.

In Tanzania, GreenCOM strengthened implementation of best practices in coastal resource management through a community environmental awards program. This program engages communities in activities that support improved coastal management and protection of coastal resources, including corals, fish stocks, and coastal habitats.

In Indonesia, illegal logging poses the single greatest threat to the country's forests, one of the world's most biologically rich. In 2004, GreenCOM focused on the

implementation of a mass media and social mobilization campaign to raise public awareness and provide both the motivation and means for public action.

In Egypt, GreenCOM's Red Sea conservation media initiative developed a television cartoon series with an environmental message focusing on the biological riches of the Red Sea, the importance of preserves, and the role of the Red Sea Rangers, a youth conservation group. The series reached 40 million viewers.

The LRM Team's Coffee Corps program provides technical expertise to developing country coffee growers, processors, and marketers to improve the quality, profitability, and environmental soundness of these countries' coffee industries. In FY 2004, Coffee Corps provided support to coffee farmer groups in Madagascar to transition from production of bulk coffee to high-value specialty shade coffee that greatly increases farmer incomes and improves livelihoods while maintaining some tree cover that provides valuable habitat for wildlife.

COFFEE CORPS

THE PERFECT CUP OF COFFEE: Coffee Corps, a USAID partner, conducts a cupping training in Mexico. With USAID help, coffee growing countries are getting better prices for their coffees. Biodiversity benefits when shade-grown coffee provides a wildlife-friendly buffer around protected areas.

In Mexico, Coffee Corps is working with USAID partner Conservation International and other NGOs to support coffee farmers growing crops near protected areas. Similar to the Madagascar activities, the program works with coffee farmers who agree to undertake production practices that support biodiversity conservation. Conservation International and Coffee Corps are discussing the potential expansion of technical assistance to coffee activities contributing to conservation in several Latin American countries.

Having data on habitat coverage and change is critical to conservation. The LRM Team supports the US Geological Survey's Earth Resources, Observation, and Science (EROS) Data Center on several biodiversity related activities. In collaboration with national teams from Benin, Togo, and Ghana, EROS completed reports on land use / land cover trends by ecoregion. Results show continued loss of savanna and forest ecosystems due to expansion of agriculture. The findings are particularly noteworthy for Ghana because it is quickly losing its remaining rainforest. Simulation modeling of some of these impacts showed strong sensitivity of species to projected climate change in the Sub-Saharan and Sudan region. USAID and USGS plan to develop a framework for monitoring and assessing

biodiversity change and threats in the region.

Partners include: Academy for Educational Development, Chemonics International, World Resources Institute, Cooperative League of the USA, The Coffee Quality Institute, The Center for International Forestry Research, Winrock International, Associates in Rural Development, Rural Development Institute, Land Tenure Center, University of Wisconsin, International Resources Group and the U.S. Geological Survey.

EGAT/Agriculture: Collaborative Research Support Program

FY 2004 Obligation: $1.34 million (DA)

EGAT's Office of Agriculture provides support to applied Collaborative Research Support Programs (CRSP) that contributes to biodiversity conservation. These include the Global Livestock CRSP, as well as the Integrated Pest Management CRSP and the Sustainable Agriculture and Natural Resource Management (SANREM) CRSP that are co-managed with EGAT's Land Resources Management Team, and the Pond Dynamics/Aquaculture CRSP which is co-managed with EGAT's Water Team.

Global Livestock Research

The Global Livestock CRSP is designed to increase food security and improve the quality of life for people in developing countries while bringing an international focus to the research, teaching, and extension efforts of U.S. institutions. This goal is being met through collaboration between U.S. land-grant institutions and national and regional institutions abroad that are involved in livestock research and development. Many of these programs also support Masters and Ph.D. graduate students of host countries, developing long-term scientific and technical capacity.

In East Africa the Global Livestock CRSP supported the Yellowstone Serengeti Mara Project, bringing together managers and researchers from Yellowstone National Park in the United States, Serengeti National Park in Tanzania, and Masai Mara National Reserve in Kenya. The goal was to build capacity for improved management at a large landscape level with a multitude of stakeholders. In FY 2004, linkages and shared perspectives on issues were built with study tours and workshops (total 114 people). The 7th Biennial Yellowstone Conference featured the East African-United States linkage as the organizational theme of the conference.

The POLECY project in Kenya and Tanzania, which ended in 2004, examined pastoral-wildlife interactions and provided data to allow better management of pastoral areas (especially conservancy lands) so that tourism based on wildlife viewing is compatible with domestic animal grazing. The project mapped pastoral use of lands, identified tenure arrangements, and quantified reductions in food security caused by combined grazing pressures of domestic and wild animals.

Finally, the Global Livestock CRSP supported a project in Central Asia (Turkmenistan, Uzbekistan, and Kazakhstan) to design and promote dissemination of low-cost livestock production systems and agricultural policy instruments for the long-term improvement of rural family welfare in an ecologically sustainable way. A key component of the project was to document the role of rangelands in the global carbon cycle and show that good management allows recovery of degraded grasslands and the sequestering of carbon.

Integrated Pest Management Research

The Integrated Pest Management (IPM) CRSP supports research in sustainable agricultural practices that promote conservation. The IPM CRSP supports efforts to develop improved pest management techniques that can lower input costs, improve yields, and enhance long-term soil fertility. These can benefit the environment and conserve biodiversity by reducing chemical runoff, managing pest susceptibility, and limiting soil erosion. In Ecuador, IPM research provided approaches for maintaining agricultural productivity over the longer term, thereby reducing the need for shifting cultivation that threatens forest resources.

Sustainable Agriculture and Natural Resources Management Research

The Sustainable Agriculture and Natural Resources Management (SANREM) Collaborative Research Support Program supports cross-sectoral research, linking sustainable agricultural production, sound resource management, and biodiversity conservation. In FY 2004, SANREM researchers conducted participatory processes with local stakeholders to identify

key research needs in promoting biodiversity conservation and sustainable resource use including: addressing wildlife-human-livestock interactions near protected areas in Kenya, Zambia, and Tanzania; reducing deforestation pressure through restoration of degraded lands in Madagascar, improving livelihoods and biodiversity conservation in the Altiplano; assessing farm-forest linkages in Southeast Asia; and fisheries research linking mariculture and coral reef connectivity in the Philippines and Tanzania.

Partners include: University of California - Davis, Virginia Tech, University of Wisconsin-Madison, University of Wyoming, Montana State University, Egerton University (Kenya), Moi University (Kenya), Tanzania National Parks, Ngorongoro Conservation Area Authority, Mara Triangle Conservancy, Kenya Wildlife Service, Kenya Fisheries Department, International Livestock Research Institute, U.S. National Park Service, USDA/Agriculture Research Service, Centro de Datos para la Conservación (Terra Nueva), Universidad de Guadalajara (Mexico), Academy of Sciences of Turkmenistan, Academy of Sciences of Uzbekistan, National Federation of Private Farmers of Kazakhstan, Central Asian Regional Environmental Center, CIRAD Montpellier, and many others.

EGAT/Agriculture: Israeli Programs

Middle Eastern Regional Cooperation and Cooperative Development Research Program

FY 2004 Obligation:$0.155 million (ESF) and $0.157 million (DA)

USAID's Israeli Programs office manages grants that bring Israeli scientists together with Arab and other developing country scientists to build cooperation and share Israel's significant expertise in agricultural and other sciences. In FY 2004, the Middle East Regional Cooperation Program provided a grant to assess species diversity in the Southern Arava Rift Valley in Jordan and Israel. The project produced a series of biotic maps in terms of landscape units, adding in human disturbances, to create sensitivity and disturbance maps. These were then used to identify regional conservation goals.

Also in FY 2004, the Cooperative Development Research Program provided a grant to explore methods of reef restoration in Jamaica in cooperation with Israeli scientists. The project will assess the stress of human activities on Jamaican reef corals, establish underwater coral nurseries, initiate reef restoration using coral nubbins and branch fragments, and train young Jamaican scientists in reef management and molecular biology of corals.

Partners include: Arava Institute for Environmental Studies, the National Institute of Oceanography, Jordanian Society for Sustainable Development, and the University of the West Indies.

PATRICK SMITH, USAID

LOCAL MONITORING TOOLS: A Nepalese village woman explains the forest sustainability criteria her small group developed during a CIFOR workshop. USAID supports applied research that gives communities tools to better manage their own natural resources.

EGAT/Environment and Science Policy Office

CGIAR; Biotechnology & Biodiversity Interface Grants Program

FY 2004 Obligation: $6.627 million (DA)

EGAT's Office of Environment and Science Policy supports the Consultative Group on International Agricultural and Natural Resources Research (CGIAR) centers for applied research and implementation of

pilot programs on productivity and conservation of agro-ecologies. While the CGIAR's main focus is on human-managed production systems, the centers' programs are designed to protect and conserve biodiversity-rich regions. The programs recognize the interdependence of farm, forest, and fisheries productivity with conservation and environmental services from areas less directly impacted by human activity. Of the 15 Centers, 10 have programs that contributed to USAID's biodiversity goals in FY 2004.

The World Agroforestry Centre (ICRAF) seeks to influence policies and institutions that mediate the interactions between agroforestry and biodiversity conservation. In FY 2004, ICRAF worked with farmers in the African Sahel on landscape-level parkland management as well as in Southeast Asia on watershed management and carbon sequestration. Near Mt. Cameroon, ICRAF worked to protect wild populations of *Prunus africana* from overharvesting by selecting especially productive genotypes for cultivated production by local farmers for the medicinal market. In Brazil, Cameroon, Indonesia, Kenya, Peru, and Uganda, ICRAF contributed to the global Alternatives to Slash and Burn program by developing assessment and analysis tools for agroforestry systems.

During the past year, the Center for International Forestry Research (CIFOR) worked to empower communities and women in the Orupembe and Sanitatas conservancies in Namibia to manage plant resources more sustainably by assessing plant stocks using participatory mapping. In Bolivia, Brazil, Cameroon, and Mexico, CIFOR reviewed existing laws and policies about management of non-timber forest products like medicinal plants. In Mexico, this led to draft recommendations for action developed with input from government, researchers, NGOs, and producer groups. CIFOR also helped publication in Peru of the "Ese Eja Health Manual" that supports the medicinal plant-based indigenous health system of the Ese Eja people.

The International Livestock Research Institute (ILRI) works on east African biodiversity issues in its People, Livestock and the Environment program, with livestock/wild species dynamics providing important entry points into improving agriculture, wild ecosystems, and human health and nutrition. The Institute helps pastoralists and governments improve pasture management, rehabilitate rangeland, control diseases that affect both livestock and wildlife, and generate income from ecotourism and sustainable wildlife harvests.

The World Fish Center works in coastal areas on protecting mangroves, reefs, and marine fisheries. The Center developed tools for monitoring reef health as part of the Coral Reef Initiative. In Sumatra and other parts of southeast Asia, it supports management of upland activities to reduce risks to fish spawning in downstream mangroves and estuaries. In the Mekong basin, the Center showed the importance of deeper water refugia for protecting freshwater fish stocks during the dry season, while helping ensure plentiful, sustainable harvests during the wet season flooding. The Center has developed strategies that emphasize the use of native and non-invasive species in aquaculture, thereby reducing risk and pressure on wild populations. The World Fish Center worked in Africa, Asia, and the Pacific Islands on post-larval survival of aquarium species, allowing captive breeding for sale rather than capture of wild stocks.

The International Center for Research in the Semi-Arid Tropics conducts participatory testing of strategies for conservation, restoration, and sustainable use of degraded agro-ecosystems with farmers, rural communities, NGOs, and decision makers as part of its Deserts Margins Program. These pilot activities result in livestock management practices that increase biodiversity and resilience of natural vegetation in arid and semi-arid zones.

The International Institute of Tropical Agriculture (IITA) is investigating the sustainability of cocoa agroforestry systems in terms of biodiversity and livelihoods in Cameroon, Cote D'Ivoire, Ghana, and Nigeria. Cocoa farms in Nigeria and Cameroon have served as mini-refuges for biodiversity and wildlife for more than 60 years. Institute research has shown that these agro-forests provide food and habitat needed by forest seed dispersers such as Blue Turacaos, hornbills, and gray parrots.

Finally, the CGIAR conserve the world's largest collection of *ex situ* crop germplasm, of which more than 50,000 samples are wild plants related to food crops or rangeland species. Many of these are rare and endangered genotypes of crops like Andean tubers that remain the basis of high-mountain rural life in the Andes.

Biotechnology and Biodiversity

In 2004, the Biotechnology and Biodiversity Interface Program awarded four new grants to conduct research on the potential risks to biodiversity from introduction of bioengineered crops into developing countries. One grant examines risks of movement of genes from sorghum crops to related native plants in Kenya and Mali. As Africa is the center of origin of sorghum, there is a possibility of gene flow to native plants. Two grants are assessing whether insects can develop tolerance to two bioengineered insect-resistant vegetables in Asia. The fourth grant monitors the impacts on insect populations of insect-resistant corn already introduced in the Philippines.

Also in FY 2004, the Program for Biosafety Systems supported implementation of regulations to assess and manage risks of biotechnology on biodiversity. Most of the countries where this program operates are parties to the Cartagena Protocol on Biosafety, an agreement under the Convention on Biological Diversity. Assistance from the program enabled developing countries to implement this agreement and establish effective regulatory systems.

Partners include: ICRAF, CIFOR, IITA, International Livestock Research Institute, WFC, International Crops Research Institute for the Semi-Arid Tropics, the International Food Policy Research Institute, Maharashtra Hybrid Seeds Company Ltd, University of Nebraska, Cornell University, UC-Davis, Indian Agricultural Research Institute, Institut Pertanian Bogor, University of the Philippines Los Baños, Kenyan Agricultural Research Institute, Université de Bamako, and Institut d'Economie Rurale du Mali, Camarines Sur State Agricultural College, LaTrobe University, Donald Danforth Plant Science Center, Michigan State University, and Western Michigan University.

EGAT/ Poverty Reduction Office

Sustainable Dairy Production

FY 2004 Obligation: $0.375 million (DA)

Through the Business Development Services section of its Implementation Grant Program, the Poverty Reduction Office supports the NGO Appropriate Technology India (AT India) in its work to conserve oak woodlands in the Garhwall Hills of the Indian Himalaya. Some of these forests are quite extensive, are the home to wildlife and diverse plant species, and are adjacent to the Kedarnath Musk Deer Sanctuary and the Nanda Devi Sanctuary.

AT India aims to achieve its conservation objectives through the promotion of a rural dairy initiative made up of small dairy producers. Using a combination of biodiversity and non-biodiversity funds, AT India is facilitating services and service markets to support the production, processing and marketing of milk and milk products. To support the development of the dairy industry, AT India is linking producers to sources of financing, milk collection services, fodder, and stud services. An important aspect of the work is to promote stall feeding and on-farm production of quality dairy feed. These practices reduce threats to natural oak forest because they keep cattle from grazing unrestricted in the forest and they reduce the need for harvesting tree fodder.

Many of the human communities living adjacent to the forests have management plans for their forests that call for restoration and sustainable use. The dairy project facilitates the provision of technologies and finance by private sector providers in order to enable villagers to implement the reductions in forest degrading activities that are outlined in their own forest plans.

Partners include: AT India.

DCHA/ Conflict Management and Mitigation Office

Conflict and Environment

FY 2004 Obligation: $0.055 million (DA)

The conflict management and mitigation office worked in 2004 on the connection between conflict, fragility, and natural resources. In FY 2004, the office published two toolkits entitled "Land and Conflict" and "Minerals and Conflict." These explained how resource abundance coupled with poor governance and corruption can actually exacerbate conflict. They also showed how conflict can be resolved through better land tenure and resource management regimes. Common approaches to biodiversity conservation, like community-based management, can help build connections among ethnically diverse communities;

PATRICK SMITH, USAID

HIMALAYAN RHODODENDRONS: The oak and rhododendron forests of northern India are threatened by uncontrolled livestock grazing. USAID partner AT India is helping dairy farmers protect the forest and gain better milk production through stall feeding.

however, this unity can be sabotaged when conflicts intensify. The office also provided technical support for biodiversity work in war-torn countries like the Democratic Republic of the Congo, where war refugees and militias can devastate wildlife populations and cause dramatic and widespread forest degradation and deforestation.

Partners include: Woodrow Wilson International Center for Scholars, Rural Development Institute, Adelphi Institute, CIFOR, and International Institute for Sustainable Development.

Global Health/ Population, Health and Environment Program

Population-Health-Environment programs

FY 2004 Obligation: $0.825 million (CSH)

USAID's Global Health Bureau supports the Population, Health, and Environment program that addresses the impacts of human populations and practices on biodiversity. The initiative recognizes that individuals cannot exercise adequate stewardship over local natural resources on which their livelihoods depend unless their basic needs for health, nutrition, and income are addressed. The program creates partnerships between conservation and natural resources management organizations and health organizations that deliver integrated primary health care interventions (including family planning, malaria, water and sanitation, and HIV prevention services) to communities inhabiting or affecting biodiversity hotspot areas.

Madagascar

In Madagascar, the Global Health Bureau, in collaboration with EGAT's Global Conservation

Program and USAID's Mission in Madagascar, supported efforts to save remaining areas of primary forest. This included integrated population, health, and environment projects in communities surrounding the Zahamena-Mantadia forest corridor in the east and the Spiny Forest in the south.

USAID also supported Voahary Salama, an association of national and international NGOs with the vision of "a healthy population living in a healthy environment based on sustainable development and a rational management of natural resources at the community level." A recent evaluation of Voahary Salama member activities during the years 2001 to 2004 demonstrated substantial improvements in indicators, including reductions in slash-and-burn farming (from 55 percent to 25 percent among members surveyed in communities where Voahary Salama members supported activities) as well as increases in contraceptive prevalence rates (from 12 percent to 17 percent) and access to safe water (from 19 percent to 24 percent).

Guatemala

In the Petén region of Guatemala around the Maya Biosphere Reserve, USAID'S Population, Health, and Environment program supported the NGO ProPetén in its Remedios II project. Emphasizing mass popular education to encourage the use of family planning and better environmental land management, the project developed a Radio Soap Opera, "At a Crossroads." Following extensive background research, ProPetén identified key themes to be highlighted throughout the program: migration, land speculation, more environmentally-friendly land-use practices, family planning, safe motherhood, and prevention of sexually transmitted infections and AIDS, as well as gender equity and intercultural relations.

Airing daily on three radio stations, the soap opera will unfold its story over a full year. Set in an imaginary village, "San Jerónimo," the drama contains typical elements of love, jealousy, intrigue, deception, and friendship. A local leader disappears and is found near death. A villainous cattle rancher is buying up village lands. A spited lover burns the mayor's corn crop to blame this on his rival. As the months progress, the writing team will introduce more complex social and environmental problems. Already the soap opera has gained wide appeal. Within the first day of transmission, the characters appeared so real that some listeners were concerned about their welfare.

The second popular education program is the "Mobile Biosphere," a cross-terrain vehicle that travels to remote communities across the Maya Biosphere Reserve to organize informal education activities including talks, mini-workshops, skits, movies, and games. Educational themes include natural pesticides and organic fertilizers, crop diversification, family planning and reproductive health, forest fire prevention, environmental sanitation (trash collection and disposal, latrines, drinking water), education, improved nutrition, and medicinal plants.

FUNDACIÓN PROPETÉN

GUATEMALA RIVER CLEAN UP: A father and his sons collect garbage in the 1.6 million hectare Maya Biosphere Reserve. USAID partner ProPetén's "Mobile Biosphere" program brings health, family planning, sanitation, and conservation messages to local residents.

WILDAID.SUVANNA GAUNTLETT

KICKBOXING FOR BEARS: Kickboxer E Puthang, a local star, gets close and personal with an endangered sun bear as part of a television ad campaign to discourage consumption of wildlife in Cambodia. USAID partner WildAid has used public awareness campaigns combined with poaching enforcement to achieve dramatic reductions in wildlife consumption in Cambodia and Thailand.

Partners include: World Wildlife Fund, Voahary Salama, Jane Goodall Institute, Dian Fossey Gorilla Fund International, and ProPetén.

Democratic Republic of the Congo

In the eastern Democratic Republic of the Congo, USAID supported the Jane Goodall Institute's innovative approach to community centered conservation. The Institute works in partnership with the Dian Fossey Gorilla Fund International and the community-based NGO, Union of Associations for Gorilla Conservation and Community Development in Eastern Democratic Republic of the Congo. The goal of the partnership is to link livelihood interventions to conservation objectives in this remote and war-ravaged region of Africa. Jane Goodall Institute works with communities who contributed land to a network of community forest reserves linking the national parks of Maiko and Kahusi Biega, a UNESCO world heritage site. The project area is habitat for important species, such as eastern lowland gorillas, chimpanzees, elephants, and okapi. Making reproductive health services available leads to smaller, healthier families, reducing pressures for wildlife hunting and land clearing. Interventions that improve human health also help generate goodwill toward the creation and protection of biodiversity reserves. Other activities include improving local governance, empowering communities, developing sustainable and more efficient agricultural and livestock practices, and applying information technology to support sustainable practices.

The Global Development Alliance

Biodiversity Conservation Alliances

FY 2004 Obligation: $0.700 million (DA) plus mission contributions of $4.410 million (ESF+DA)

USAID's Global Development Alliance (GDA) initiative provides a model for creating public-private partnerships, or alliances, that draw upon the resources and expertise of the private and public sectors to further USAID's development goals. The GDA model recognizes the fundamental shift in global capital flows during the last three decades: today, more than 80 percent of the resource flows from the United States to the developing world are private and just 14 percent are official development assistance. By engaging the private sector, the GDA model harnesses these private flows to meet pressing development needs. Alliances function by establishing partnerships for which USAID funding is significantly leveraged by resources (both cash and in-kind) from public, non-profit and for-profit organizations. In the past four years, USAID has engaged in more than 300 alliances with the private and non-profit sectors, leveraging more than $3.7 billion in cash and in-kind resources from these partners, which has been matched by approximately $1.1 billion from USAID.

In Indonesia, the GDA Secretariat contributed $300,000 to the "Alliance to Promote Timber Certification and Combat Illegal Logging in Indonesia" and USAID's Mission in Indonesia contributed $425,000 to the "Alliance to Build Market Links to Conserve Indonesia's Forests." USAID's contribution to these alliances leveraged approximately $21.5 million from partners. Together, they reduced illegal logging through a certification program, which developed a system to mark and distinguish between legal and illegal timber in three Indonesian provinces, and reduced financing and investment in companies engaged in destructive or illegal logging in Indonesia. Areas protected from logging include Tesso Nilo on Sumatra, which is known to have the highest level of plant biodiversity in the world, and East Kalimantan, which is home to the last viable population of orangutans in that region. In FY 2004 1.5 million hectares of forest land were under improved management as a result of the program, additional agreements for collaborative forest management were obtained from concessionaires, and revenues of $134 per household per year were generated.

More than 20 contributing partners to the Indonesian GDAs include: The Forests Dialogue, ESRI, IKEA, World Wildlife Fund, Indonesian Forest Product Companies (Sumalindo and Intracawood), Newbridge Capital, ProForest, Goldman Sachs, World Resources Institute, Indonesian Wood Panel Association, British Petroleum, Global Forest and Trade Network, Tropical Forest Trust, McKinsey and Company, Caterpillar International, Association of Indonesian Forest Concession Holders, The Nature Conservancy, ABN AMRO and other banks, American Forest and Paper Association, and Edelman Worldwide.

An alliance with WildAid to combat wildlife and forest products trafficking in Cambodia was funded in FY 2004 by the GDA Secretariat ($400,000 DA), EAPEI ($500,000 ESF), and USAID's Mission in Cambodia ($393,074 ESF). Further details on this alliance can be found in the ANE Regional Program description. Alliance partners include WildAid, Ministry of Environment Thailand, J. Walter Thompsen Advertising Agency, Cambodian Department of Forestry and Wildlife, and ACAP Thailand.

Table 1. Public-Private Alliances for Biodiversity Conservation, FY 2004*

Program	Country	USAID Source	USAID Amount in US $	Non-USAID Leverage in US $
Sustainable Forest Mgmt Combating Illegal Logging, Certification	Indonesia	Indonesia GDA Sec.	425,000 300,000	21,503,000
Combating Wildlife and Forest Products Trafficking (WildAid)	Cambodia, Thailand	Cambodia ANE/EAPEI GDA Sec.	393,074 500,000 400,000	1,091,470
Community Forestry Alliance for Cambodia	Cambodia	Cambodia	300,713	2,400,000
Conservation of the Tapyta Private Reserve	Paraguay	Paraguay	110,000	418,000
Sustainable Forest Products Global Alliance	Global	EGAT	2,081,602	27,500,000
Lake Malawi Chia Lagoon Watershed	Malawi	Malawi	786,700	2,712,042
Coral Gardens Initiative	Fiji	ANE/EAPEI	500,000	614,470
Conservation in the Congo Basin	DR Congo, Cameroon, Central Afr. Republic, Equatorial Guinea, Gabon	GH	400,000	690,000
	Total		**$5,109,676**	**$21,921,000**

* Since the alliances are dynamic entities, these numbers are regularly updated and will change as additional data become available. Non-USAID leverages provided in this table in some cases represent total contributions over the life of the project.

USAID/NEPAL

SHEY PHOKSUNDO NATIONAL PARK: The high mountains of Dolpa, Nepal are home to the snow leopard, one of the most elusive animals in the world. USAID works to preserve these and other species by involving communities in park and buffer zone management.

As part of implementing the vision of conserving the Upper Paraná Atlantic Forest, USAID'S mission in Paraguay contributed $110,000 to a GDA to create and manage the Tapyta Private Natural Reserve. The Reserve constitutes 70 percent of a conservation corridor between two publicly-held natural areas, the San Rafael Reserve of Managed Resources and the Caaguazú National Park. The remaining 30 percent contains rural communities, requiring landscape restoration through rural development. Tapyta also protects a representative sample of the Alto Paraná Atlantic Forest, one of the 200 seriously threatened ecosystems in the world. Tapyta contains threatened species such as the "chopi sa'yjhu" (yellow thrush) and the "aguara guazu" (maned wolf). Partners in the Alliance are Fundacion Moises Bertoni, Conservation International, and Forestal Iguazu, who together are contributing $418,000 towards the success of the effort.

In FY 2004, the Sustainable Forest Products Global Alliance received funding of $2.08 million from USAID's Forestry Team. The Alliance seeks to reduce illegal logging, improve the welfare of local communities, and encourage sustainable forestry. With activities in many Asian and Latin American countries that link producers with consumers in the West, the Alliance truly has a global reach and impact. Further details on this alliance can be found in the Forestry Team program description. Alliance members included Hewlett Packard, Time Inc., Andersen Corporation, Certified Wood and Paper Association, Forest Trends, USDA Forest Service, The Home Depot, Metafore, and WWF.

USAID's Mission in Malawi and Washington State University collaborated in FY 2004 to form a GDA to support community-based management of the Lake Malawi Chia Lagoon Watershed. The alliance will identify and encourage sustainable uses for the watershed's natural resources, flora, fauna, and land.

Finally, USAID's population and environment program in the Global Health Bureau provided $400,000 to a GDA for conservation in the Congo Basin. The program addresses health and development needs in addition to biodiversity conservation. Further details can be found in the Global Health description. Alliance members included Population Reference Bureau, Environmental Health Project, Conservation International, Jane Goodall Institute, John Snow, Inc., WWF, The Nature Conservancy, International Resources Group Limited, and Population Action International.

USAID'S BIODIVERSITY PROGRAMS AND ACTIVITY FUNDING, FY 2004

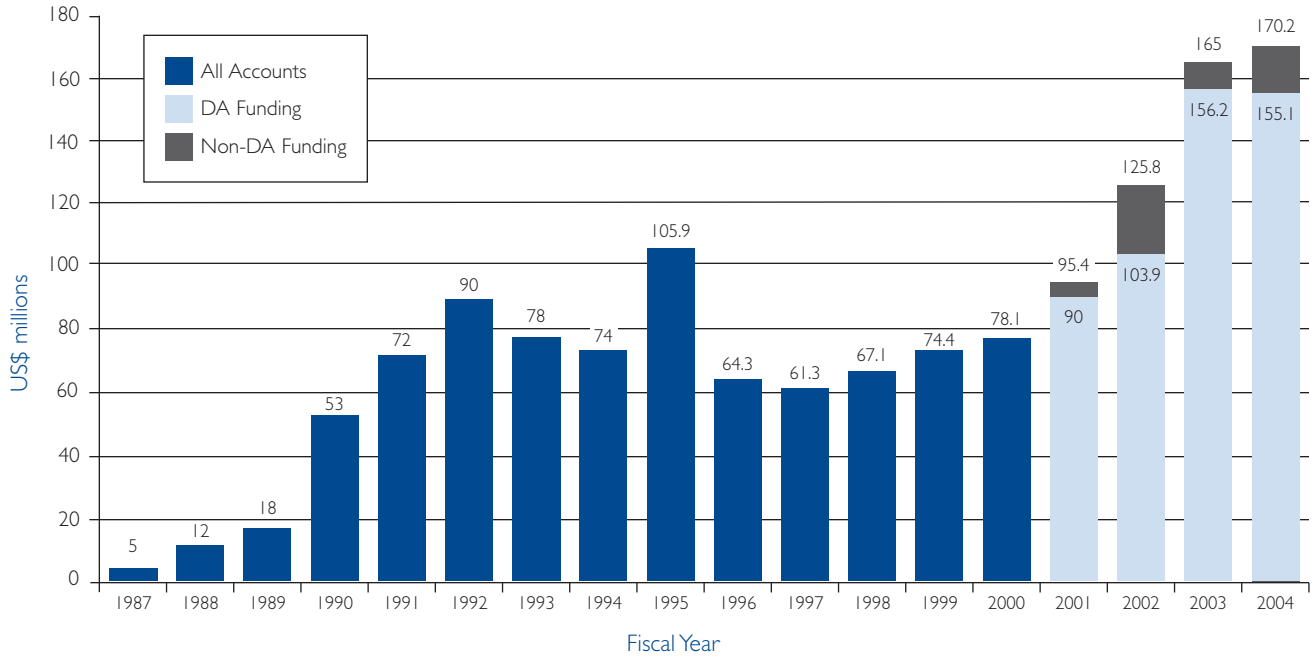
USAID Biodiversity Conservation Budget Trends

USAID has funded biodiversity conservation programs for nearly 30 years. The Agency's assistance for biodiversity conservation began in the 1970s, with missions obligating small amounts of funds primarily toward conservation of natural forests. In 1986, Sections 118 and 119 were added to the Foreign Assistance Act, and the first Biodiversity Conservation directive of $1 million appeared in the FY 1986 Appropriations Act.

In 1990, USAID's project and program funding was complemented by the Enterprise of the Americas Initiative which began promoting debt-for-nature swaps in the Latin America and Caribbean region and creating environmental trust fund projects.

By 1992, the Agency's biodiversity conservation funding from all funding accounts had increased to $90 million (Figure 1). USAID funding for biodiversity fluctuated in subsequent years, with a steady increase since FY 1997. In FY 2004 the biodiversity directive became an earmark of $155 million from the Development Assistance (DA) account. USAID was able to reach that earmark with $155.1 million (DA) of funding in FY 2004. A total of $170.222 million in funding for biodiversity was achieved in FY 2004 by including support for biodiversity activities funded through all accounts such as the Economic Support Fund (ESF), Iraq Reconstruction and Restoration Fund (IRRF), Andean Counterdrug Initiative (ACI), Child Survival and Health (CSH), Freedom Support Act (FSA), and supplemental funds.

Figure 1. USAID Funding of Biodiversity Conservation, 1987-2004 (all accounts*)



*Disaggregated figures for DA and Non-DA funding are only available from FY 2001 onwards.

Table 2. USAID Biodiversity Programs and Activity Funding, FY 2004

Program Name	Program Description	FY 2004 Biodiversity Funding in US $	Type of Funds*
Africa (AFR)			
Africa Regional Program — AFR/SD	Environmental Governance; Innovative Technologies, FRAME	1,408,000	DA
Africa Regional Program — RCSA	Improving the Mgmt of Transboundary Natural Res. Areas	1,500,000	DA
CARPE/CBFP	Central African Regional Program for the Environment Congo Basin Forest Partnership/Mountain Gorillas	16,000,000	DA
Dem. Republic of the Congo	Protection of Biodiversity through Disarmament, Demobilization, and Reintegration of Ex-Combatants	1,621,000	DA
Ghana	Community-based Ecotourism Project	200,000	DA
Guinea	Increased Use of Sustainable Nat. Res. Mgmt. Practices	3,800,000	DA
Kenya	Improved Natural Resources Mgmt. in Biodiversity Areas	2,917,000	DA
Liberia	Liberia Forest Initiative	1,100,000	Suppl
Madagascar	Biologically Diverse Ecosystems Conserved	8,232,991	DA
Malawi	Incr. Sustainable Use, Conservation & Mgmt. of Nat. Res.	2,900,000	DA
Mozambique	Biodiversity Conservation Program	1,000,000	DA
Namibia	Promoting Communal Conservancies	2,731,000	DA
Nigeria	Sustainable Agriculture and NRM in Cross River State	1,178,000	DA
Senegal	Improving Natural Resources Management Policy & Practice	1,000,000	DA
Tanzania	Improved Conservation of Coastal Resources & Wildlife	2,895,000	DA
Tanzania	Improved Conservation of Coastal Resources & Wildlife	300,000	ESF
Uganda	Conservation of Critical Habitats and Species	4,402,000	DA
Zambia	Community-Based Natural Resources Mgmt. & Sust. Ag.	1,300,000	DA
	Africa DA Total	**$53,084,991**	
	Africa Total	**$54,484,991**	
Asia and the Near East (ANE)			
ANE Regional Program	ANE Support Team and Central Programs	620,000	DA
ANE Regional Program	East Asia and Pacific Environmental Initiative	1,200,000	ESF
Afghanistan	Conservation of Biologically Important Areas	3,130,000	DA
Bangladesh	Improved Management of Water and Tropical Forest Resources	2,500,000	DA
Cambodia	Sustainable Management of Natural Resources and Biodiversity	694,000	ESF
Egypt	Egyptian Environmental Policy Program	1,500,000	ESF
Indonesia	Strengthened & Decentralized NRM	8,500,000	DA
Iraq	Restoring Iraq's Mesopotamian Marshes	4,000,000	IRRF
Nepal	Natural Resources Governance and Biodiversity Conservation	1,420,000	DA
Philippines	Improved Local Governance of Threatened Biological Resources	7,900,000	DA
	Asia and the Near East DA Total	**$24,070,000**	
	Asia and the Near East Total	**$31,464,000**	
Europe and Eurasia (E&E)			
Russia	Forest Resources and Technology	1,250,000	FSA
	Europe and Eurasia DA Total	**0**	
	Europe and Eurasia Total	**$1,250,000**	
Latin America and the Caribbean (LAC)			
LAC Regional	LAC Support Team	976,000	DA
LAC Regional	Parks in Peril	1,517,500	DA
LAC Regional	Amazon Basin Conservation Initiative	8,500,000	DA
Caribbean Regional Program	Improved Envir. Mgmt. of Public and Private Entities	382,500	DA
Central American Reg. Env. Program	PROARCA — Improved Env. Mgmt in Mesoamerican Corridor	5,771,000	DA
Bolivia	Natural Resources Sustainably Managed	4,141,000	DA
Brazil	Environmentally Sustainable Land Use	6,650,000	DA
Colombia	Forestry and Sustainable Development Program	4,088,934	ACI

Program Name	Program Description	FY 2004 Biodiversity Funding in US $	Type of Funds*
Dominican Republic	Improved Policies for Environmental Protection	1,418,000	DA
Ecuador	Biodiversity Conservation in Globally Significant PAs & Buffers	5,931,000	DA
Guatemala	Improved Nat. Res. Mgmt. & Conservation of Biodiversity	2,278,000	DA
Honduras	Improved Management of Watersheds, Forests, & PAs	2,105,000	DA
Jamaica	Ridge to Reef Watershed Management	1,688,000	DA
Mexico	Conservation & Sustainable Natural Resources Management	4,184,000	DA
Nicaragua	Natural Resources Management	1,000,000	DA
Panama	Improved Sustainable Management of Natural Resources	5,072,000	DA
Paraguay	Sustainable Management of Globally Important Ecoregions	938,000	DA
Peru	Strengthened Environmental Management	2,400,200	DA
	Latin America and the Caribbean DA Total	**$54,952,200**	
	Latin America and the Caribbean Total	**$59,041,134**	
Centrally Funded Programs			
EGAT Bureau			
NRM — Biodiversity Conservation	Global Biodiversity Conservation	6,200,000	DA
NRM — Forest Conservation	Sustainable Forest Management	3,933,000	DA
NRM — Water Resources Mgmt	Coastal, Marine, Freshwater Mgmt; Aquaculture Res. Mgmt	2,016,000	DA
NRM — Land Resources Mgmt	Environmental Governance; GreenCOM; FRAME	1,600,000	DA
Agric. — University Research	Collaborative Research Support Program	1,340,000	DA
Agric. — Israeli Programs	Middle Eastern Reg. Cooperation — Biodiversity Programs	154,945	ESF
Agric. — Israeli Programs	Cooperative Development Research Program	156,900	DA
Environment & Science Policy	CGIAR; Biotech & Biodiversity Interface Grants Program	6,626,573	DA
Poverty Reduction	Sustainable Dairy Production	375,000	DA
Other Central Bureaus			
DCHA/CMM	Conflict and the Environment	55,000	DA
Global Health - Pop. & Repr. Health	Population - Health - Environment Programs	825,000	CSH
GDA Secretariat	Biodiversity Conservation Alliances	700,000	DA
	Centrally Funded Programs DA Total	**$23,002,473**	
	Centrally Funded Programs Total	**$23,982,418**	
	Biodiversity Funding in FY 2004 (DA Funds only)	**$155,109,664**	
	Total Biodiversity Funding in FY 2004	**$170,222,543**	

* Development Assistance (DA), Economic Support Fund (ESF), Iraq Reconstruction and Restoration Fund (IRRF), Andean Counterdrug Initiative (ACI), Child Survival Health (CSH), Freedom Support Act (FSA), Supplemental (Suppl.)

Table 3. U.S. Government International Biodiversity Funding in US $, FY 2004†

USAID	170,222,543
Department of Treasury (GEF and TFCA)	66,000,000
Fish and Wildlife Service	17,700,000
Department of State	6,360,000
Forest Service International Programs	6,000,000
National Park Service	846,000

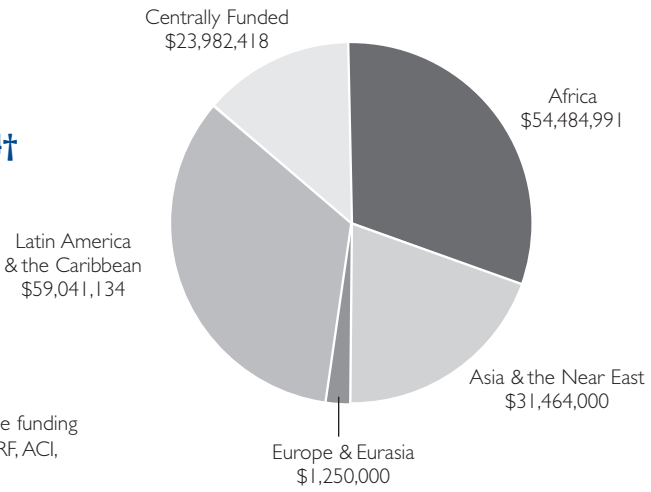
† This list is not necessarily comprehensive.

Analysis of USAID's FY 2004 Budget

USAID funded biodiversity in all regions, at varying levels (Figure 2). In FY 2004, the Latin America and the Caribbean region accounted for 34.7 percent of USAID biodiversity funding, the Africa region accounted for 32 percent, the Asia and the Near East region accounted for 18.5 percent, and 0.7 percent was accounted for in the Europe and Eurasia region. Global biodiversity programs managed by Washington accounted for 14 percent of FY 2004 funds.

Relative to FY 2003, funding for biodiversity programs in FY 2004 increased by approximately 34 percent in the Latin America and the Caribbean region, due primarily to the new Amazon Basin Conservation Initiative and significant increases in several programs including Bolivia, Honduras and Mexico. Biodiversity funding in the Africa region increased by 28 percent from FY 2003 to FY 2004. This was due in part to new initiatives in four countries: the Democratic Republic of Congo, Liberia, Mozambique and Nigeria; and increases in funding in several existing programs. Investments in Europe & Eurasia doubled in FY 2004, while investments in other regions remained generally stable. In FY 2004, as in all previous years except FY 2003, funding for the Tropical Forest Conservation Act was appropriated directly to the Department of Treasury and did not pass through USAID.

Figure 2. USAID Funding for Biodiversity Conservation by Region in FY 2004†



†Amounts shown here include funding from all accounts: DA, ESF, IRRF, ACI, CSH, FSA and supplemental.

Total U.S. Government Funding for International Biodiversity Conservation*

Although the majority of the U.S. bilateral development assistance for biodiversity conservation is channeled through USAID, other U.S. agencies participate. These agencies include Department of Treasury, Department of State, the Fish and Wildlife Service, the USDA Forest Service, and the National Park Service (Table 3, page 101).

In FY 2004, of the $139 million appropriated to the Global Environment Facility through the Department of Treasury, roughly a third, or $46 million, supported biodiversity projects. An additional $20 million was appropriated to the Department of the Treasury in support of the Tropical Forest Conservation Act. The Fish and Wildlife Service's International Affairs Program received $17.7 million for the protection of endangered species, of which $4 million was appropriated for the Neotropical Migratory Bird Conservation Act.

In FY 2004, $6.36 million was appropriated to the Department of State for international conservation programs through the International Organizations and Programs Account. Funds supported international organizations and programs, such as Convention on International Trade in Endangered Species (CITES), Ramsar Convention, and International Tropical Timber Organization, as well as the United Nation's Environment Program and the World Heritage Convention. Approximately $6 million was appropriated to the Forest Service International Programs to support biodiversity conservation in forests. Finally, $846,000 was appropriated to the National Park Service in FY 2004 for the establishment and management of parks in other nations.

*Total US Government funding figures were compiled from official sources by the International Conservation Partnership, comprised of Conservation International, The Nature Conservancy, Wildlife Conservation Society, and World Wildlife Fund.

ANNEX 1. SECTION 119 OF THE FOREIGN ASSISTANCE ACT OF 1961 AS AMENDED

Sec. 119 Endangered Species*

(a) The Congress finds the survival of many animal and plant species is endangered by overhunting, by the presence of toxic chemicals in water, air and soil, and by the destruction of habitats. The Congress further finds that the extinction of animal and plant species is an irreparable loss with potentially serious environmental and economic consequences for developing and developed countries alike. Accordingly, the preservation of animal and plant species through the regulation of the hunting and trade in endangered species, through limitations on the pollution of natural ecosystems, and through the protection of wildlife habitats should be an important objective of the United States development assistance.

(b) In order to preserve biological diversity, the President is authorized to furnish assistance under this part, notwithstanding section 660, to assist countries in protecting and maintaining wildlife habitats and in developing sound wildlife management and plant conservation programs. Special efforts should be made to establish and maintain wildlife sanctuaries, reserves, and parks; to enact and enforce anti-poaching measures; and to identify, study, and catalog animal and plant species, especially in tropical environments.

(c) Funding Level.—For fiscal year 1987, not less than $2,500,000 of the funds available to carry out this part (excluding funds made available to carry out section 104(c)(2), relating to the Child Survival Fund) shall be allocated for assistance pursuant to subsection (b) for activities which were not funded prior to fiscal year 1987. In addition, the Agency for International Development shall, to the fullest extent possible, continue and increase assistance pursuant to subsection (b) for activities for which assistance was provided in fiscal years prior to fiscal year 1987.

(d) Country Analysis Requirements.—Each country development strategy statement or other country plan prepared by the Agency for International Development shall include an analysis of-

(1) the actions necessary in that country to conserve biological diversity, and
(2) the extent to which the actions proposed for support by the Agency meet the needs thus identified.

(e) Local Involvement.—To the fullest extent possible, projects supported under this section shall include close consultation with and involvement of local people at all stages of design and implementation.

(f) PVOs and Other Nongovernmental Organizations.— Whenever feasible, the objectives of this section shall be accomplished through projects managed by appropriate private and voluntary organizations, or international, regional, or national nongovernmental organizations, which are active in the region or country where the project is located.

(g) Actions by AID.—The Administrator of the Agency for International Development shall-

(1) cooperate with appropriate international organizations, both governmental and nongovernmental;
(2) look to the World Conservation Strategy as an overall guide for actions to conserve biological diversity;

(3) engage in dialogues and exchanges of information with recipient countries which stress the importance of conserving biological diversity for the long-term economic benefit of those countries and which identify and focus on policies of those countries which directly or indirectly contribute to loss of biological diversity;
(4) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity;
(5) whenever possible, enter into long-term agreements in which the recipient country agrees to protect ecosystems or other wildlife habitats recommended for protection by relevant governmental or nongovernmental organizations or as a result of activities undertaken pursuant to paragraph
(6), and the United States agrees to provide, subject to obtaining the necessary appropriations, additional assistance necessary for the establishment and maintenance of such protected areas;
(6) support, as necessary and in cooperation with the appropriate governmental and nongovernmental organizations, efforts to identify and survey ecosystems in recipient countries worthy of protection;
(7) cooperate with and support the relevant efforts of other agencies of the United States Government, including the United States Fish and Wildlife Service, the National Park Service, the Forest Service, and the Peace Corps;
(8) review the Agency's environmental regulations and revise them as necessary to ensure that ongoing and proposed actions by the Agency do not inadvertently endanger wildlife species or their critical habitats, harm protected areas, or have other adverse impacts on biological diversity (and shall report to the Congress within a year after the date of enactment of this paragraph on the actions taken pursuant to this paragraph);
(9) ensure that environmental profiles sponsored by the Agency include information needed for conservation of biological diversity; and
(10) deny any direct or indirect assistance under this chapter for actions which significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas.

(h) Annual Reports.—Each annual report required by section 634(a) of this Act shall include, in a separate volume, a report on the implementation of this section.

* Source: http://www.usaid.gov/our_work/environment/compliance/faa_section119.htm

ANNEX II. ACRONYMS

ACC	Afghanistan Conservation Corps
AEEB	Assistance for Eastern Europe and the Baltic States
AFR/SD	Africa Bureau, Office of Sustainable Development
CARICOM	Caribbean Community Secretariat
CARPE	Central African Regional Program for the Environment
CBD	Convention on Biological Diversity (United Nations)
CBFP	Congo Basin Forest Partnership
CBNRM	Community Based Natural Resources Management
CCD	Convention to Combat Desertification (United Nations)
CGIAR	Consultative Group on International Agricultural Research
CIFOR	Center for International Forestry
CITES	Convention on International Trade in Endangered Species
CRMP	Coastal Resources Management Program
CRSP	Collaborative Research Support Program
DA	Development Assistance
EAPEI	East Asia and Pacific Environment Initiative
EGAT	Bureau for Economic Growth, Agriculture and Trade
ESF	Economic Support Funds
FSA	Freedom Support Act
FY	fiscal year
GCP	Global Conservation Program
GDA	Global Development Alliance
GLOWS	Global Water for Sustainability
ICRAF	World Agroforestry Centre
ICRAN	International Coral Reef Action Network
IPOPCORM	Integrated Population and Coastal Resource Management Program
IWRM	Integrated Water Resources Management
MACH	Management of Aquatic Ecosystems through Community Husbandry
NGO	Non-governmental Organization
NTFP	Non Timber Forest Product
PROARCA	Regional Environmental Program for Central America
PUMA	Conservation and Sustainable Use of the Environment
R2RW	Ridge to Reef Watershed Program
RCSA	Regional Center for Southern Africa
SANREM	Sustainable Agriculture and Natural Resources Management
SCALE	Systems-based Collaborative Action for Livelihoods and the Environment
SUCCESS	Sustainable Coastal Communities and Ecosystems
TFCA	Tropical Forest Conservation Act
UNCCC	United Nations Framework Convention on Climate Change
USAID	U.S. Agency for International Development
USDA	U.S. Department of Agriculture
WWF	World Wildlife Fund

U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, DC 20523
www.usaid.gov/our_work/environment/biodiversity/index.html