

**United States Activities in Support of the
U.N. Convention to Combat Desertification**

June, 2002

POLICY OVERVIEW

Since the U.S. became a Party in February 2001, the Department of State has focused on policy issues related to the effective functioning of the CCD Secretariat and the issue of opening a land degradation (desertification and deforestation) window in the GEF. The U.S. supports the idea of a CCD focused on action and grassroots solutions. Bilaterally and regionally, the U.S. works with affected developing country Parties to the CCD, local and international non-governmental organizations, and multilateral development banks on anti-desertification program activities, including education, community development, and capacity building, with the goal of empowering local people to combat desertification by identifying needs and solving problems themselves.

U.S. program activities to implement the technical provisions of the Convention are carried out chiefly by the United States Agency for International Development (USAID). The Department of the Interior (Bureau of Land Management) and the Department of Agriculture also carry out program activities in support of the implementation of the Convention.

RESOLUTION OF ADVICE AND CONSENT

The Congressional Resolution of Advice and Consent for the CCD set forth, *inter alia*, the following understandings, included in the U.S. instrument of ratification:

1. as a developed country party, the United States is not obligated to satisfy specific funding requirements or other specific requirements regarding the provision of any resource, including technology, to affected country parties;
2. the Convention does not impose mandatory obligations to provide funding for the Global Environmental Facility (GEF); and
3. no changes to existing U.S. land management practices and programs will be required to meet obligations incurred under the Convention

ROSTER OF EXPERTS

Article 24 of the Convention provides for the establishment of a Roster of Independent Experts with expertise and experience in disciplines relevant to combating desertification and mitigating the effects of drought. The U.S. Government has established a website, hosted by the Smithsonian Institution, to receive applications for membership on the Roster. Applications are received by the Department of State, submitted to an interagency review process to ensure they meet basic criteria, and the names of nominees are then submitted to the UNCCD Secretariat by the Department of State. The website may be viewed at www.si.edu/intrel/unccd.

INTERNATIONAL ACTIVITIES BY USG AGENCIES IN SUPPORT OF THE CCD

Education and information sharing are essential to the successful implementation of the Convention domestically and at a global level. In October 1994, the United States Bureau of Land Management and the U.S. Environmental Protection Agency sponsored an international symposium and workshop on "Desertification in Developed Countries." In May 1997, the Bureau of Land Management and the International Arid Lands Consortium sponsored another international symposium and workshop titled "Combating Desertification: Connecting Science with Community Action." Both were very successful and involved more than a total of 340 people from more than fifty countries.

These two conferences generated interest on the part of the governments of South Africa and Namibia. Those countries, with the help of the Bureau of Land Management, are organizing an international conference to be held April 2002 in Africa titled, "Alternative Ways to Combat Desertification: Connecting Community Action with Science and Common Sense."

USAID AND IMPLEMENTING THE UNCCD OBJECTIVES

The United States Agency for International Development (USAID) is the lead USG agency implementing the UNCCD overseas. The tenets of the Convention, calling for a bottom-up and participatory approach to combating desertification, echo the focus of USAID's approach to natural resource management, improved agriculture practices, and integrated water resource management. The mainstay of USAID's involvement in the CCD is carried out through its Mission and Washington-based activities that address the root causes of desertification.

USAID addresses these objectives in a variety of diverse programs in all geographical regions, but primarily in Africa. Seventy-one percent of Africa's area is classified as drylands. Since the great Sahelian droughts of the 1970's, efforts to combat desertification have been a major focus of development activities in Africa. USAID has 20-30 years experience in natural resource management in Africa aimed at increasing livelihoods and the quality of life, while maintaining and increasing land productivity. Desertification is a critical issue in other regions of the world, but it has not gained the attention that it has in Africa. This report reflects this greater depth of experience.

While few USAID programs worldwide have a stated objective of combating desertification, it is through the actions of programs that address sustainable agriculture, improved agricultural practices, natural resource management, conservation of natural resources and integrated water management in arid, semi-arid and dry sub humid habitats, that the process of desertification is slowed, halted and, eventually, reversed.

USAID and its partner organizations focus on building the capacity of communities and local institutions to utilize new technologies and tools to improve management of agricultural lands and natural resource areas. Community based natural resource management (CBNRM) promotes the devolution to, and capacity of communities to effectively manage their resources

The range of programs that address desertification generally falls within the technical focus of USAID's new Pillar Bureau of Economic Growth, Agriculture and Trade. Many of these programs, especially those in natural resource management, environment, small scale agriculture and integrated water resource management have strong links to the Pillar Bureau for Democracy, Conflict and Humanitarian Assistance. Some of these activities are highlighted below; for more complete descriptions of activities please refer to the regional annexes.

SUSTAINABLE AGRICULTURE AND NATURAL RESOURCE MANAGEMENT

Sound environmental management of agricultural activities is essential for sustaining the natural resource base in dryland ecosystems and mitigating the effects of drought. Farming practices that increase soil organic matter increase the soil's ability to hold water and allow deeper rooting of plants making crops better able to withstand drought. Appropriate pasture and livestock management reduces overgrazing and resulting land degradation. More efficient irrigation systems conserve water for critical needs other than agriculture, thereby reducing conflict over this increasingly scarce resource. Involving local stakeholders

in the management of natural resources ensures that those most dependent on the natural resource base are able to maintain its productivity for their children.

At the regional and national level, USAID supports research, capacity building, and the development of information systems that inform decision making and policy development related to agriculture. Monitoring systems such as the Famine Early Warning Systems Network (FEWS-NET) harness technology to provide decision-makers with critical information on weather patterns, food scarcity and land use management. Participatory research carried out by the International Agricultural Research Centers and U.S. Universities is identifying management practices and technologies that mitigate the impact of drought. This research includes farmers in developing technologies that are well suited to local conditions. Breeding programs develop high-yielding crop varieties appropriate for arid and semi-arid environments. In addition, USAID staff are actively involved in the UNCCD's Committee on Science and Technology, particularly in the areas of early warning systems and information and technology transfer.

At the community level, USAID interventions increase local participation in the management of the natural resource base. Community Based Natural Resource Management (CBNRM) activities involve those most dependent on the long-term preservation of natural resources in their management. This encourages more transparent governance and improved stewardship of the land. The promotion of diversified cropping, agroforestry, conservation farming, contour farming and alternatives to slash and burn farming increase soil organic matter, improve water infiltration and reduce erosion. These farming systems are more productive, better able to withstand the effects of drought and other disasters, and reduce the contamination of streams and groundwater by animal waste and agricultural chemicals.

Examples of USAID programs are presented in the following bullets. For more complete program descriptions please refer to the regional annex.

- In **Mali**, USAID's inputs to the Upper Niger River Valley Program (OHVN) has contributed to 33,000 producers, organized by a USAID partner into cooperatives, adopting practices that improve and diversify livelihoods while decreasing degradation rates. Agricultural intensification and the widespread adoption of soil and water conservation techniques have been a large factor in halting or reversing deforestation in many of the village lands. OHVN support has led to over a dozen communities negotiating agreements with the highly centralized Forestry Service giving the communities rights and responsibilities over local forestlands. This has led to decreased degradation in eight of nine forests assessed by the U.S. Geological Survey—a result that is helping to form a new paradigm for sustainable rural economic development based on a partnership between communities and the State.
- In areas of **Uganda**, farmers are challenged by steep hillsides and severe demographic pressure. Collaboration amongst USAID partners (the International Center for Research in Agroforestry (ICRAF), Agro-Forestry Research Network for Africa (AFRENA), Africare, and Heifer Project international (HPI)) has assisted farmers to establish fodder banks, boundary plantings, and rotational woodlots to improve soil fertility and reduce erosion, and to grow trees on-farm to enhance food security through cash earnings and increased productivity. Productivity and sources of livelihood have increased, and fallow requirements and erosion have decreased. An independent evaluation showed that the program had contributed directly to sustainable production, higher productivity of land, significantly better incomes, local control and environmental protection by reducing runoff and consequent erosion by as much as 70%.
- In **Mali** - the Sustainable Agriculture and Natural Resource Management (SANREM) Collaborative Research Support Program (CRSP) builds capacity for natural resource decision making,

democratization, and conflict management; and conducts research on improved land management practices to enhance soil fertility and maintain productivity. In addition, SANREM's West Africa Project seeks to improve natural resource management practices in agro-pastoral systems of the arid and semi-arid regions of West Africa. Project activities are organized around building and supporting institutions for effective natural resource management (NRM) decision-making.

- The objective of **Famine Early Warning System Network** (FEWS NET) is to help establish more effective and sustainable food security information networks in Africa that reduce the vulnerability of groups at risk. FEWS NET works directly with African organizations to gather, analyze, and distribute information on agriculture, weather, and other areas important in monitoring for early signs of food insecurity. FEWS NET field representatives work with African partners to produce monthly food security reports and periodic assessments of vulnerability.
- In **Malawi**, USAID is extending improved natural resource management technologies to a large segment of the rural population that depend on a natural resource base for their livelihoods and growth. The number of farmers adopting improved soil conservation practices and sustainable natural resource management has significantly increased over the years. The Malawi Agroforestry Extension Project (MAFE), implemented through a cooperative agreement with Washington State University (WSU), has had success in introducing technologies that control runoff and soil erosion. In 2001, 52,000 farm families adopted improved soil conservation practices, including *vetiver* contour strips.
- In **Haiti**, USAID seeks to slow the rapid pace of environmental degradation by improving natural resource management through: increased adoption of sustainable natural resource management practices; replication of successful models of watershed/catchment rehabilitation, and civil society organizations implementing environmental solutions. As a result of tree planting and other activities, soil erosion, loss of soil fertility, and other damage that traditionally accompanies tropical downpours have been visibly and dramatically reduced in all areas of USAID interventions.
- USAID supports the Consultative Group on International Agricultural Research (CGIAR), which is well positioned internationally and has the experience and expertise to address the on going problems associated with desertification (see annex). The International Crops Research Institute for the Semi-Arid Tropics provides one such example: The research program, "Combating desertification and reducing poverty in the desert margins of sub-Saharan Africa," focuses on identifying technologies, policies, and institutional innovations to raise agricultural productivity and farmer incomes while combating land degradation and promoting sustainable use of the natural resource base in the desert margins.

NATURAL RESOURCE MANAGEMENT AND BIODIVERSITY CONSERVATION

Desertification results in the loss of productivity and the reduction of ecosystem health. Combating desertification requires a multi-pronged approach. The main focus is on the wise use of agricultural land, increasing yields in combination with decreasing erosion and the inappropriate use of water. When arable land is desertified, agriculture is often attempted in less suitable, or more arid lands, thereby exacerbating the desertification process. Marginal lands are often already under stress due to over-grazing by domestic livestock. Historically, these more marginal areas are also often the remaining key biodiversity areas for large assemblages of grazing wildlife and their ecological communities. Natural resource management and biodiversity programs address the maintenance of these ecological systems and their key species and communities for the benefit of stakeholders. Many benefits are tangible, such as the development of ecologically sustainable businesses and resource uses. Other, less tangible benefits, in

both protected and multiple-use areas, relate to ecosystem processes such as pollination, water purification and soil formation.

Through its NRM and biodiversity programs, USAID promotes alternative land uses for the benefit of local communities and the ecosystems in which they live. Foremost in these programs, is the devolution to these communities, of both resource decision making authority and the capacity to manage their natural resources. Many of these activities overlap with improved agriculture programs. Often these activities act as buffer or multiple use zones between strictly protected areas and more traditional agriculture. Community lands often provide critical wildlife dispersal areas between protected areas.

Promotion of wildlife-friendly activities has economic benefit for both local communities and governments. USAID NRM programs work with communities to set-up ecotourism businesses, promote non-cultivar agriculture such as veld products in southern Africa, bee-keeping, non-timber forest products (e.g. essential oils from dry forests in Nepal), medicinal plants, sustainable hunting for food and trophy hunting. The aim of these programs is promote alternative uses suitable to fragile landscapes. Examples of USAID programs are presented in the following bullets. **For more complete examples please refer to the regional Annex.**

- The results from USAID's support to decentralization and environmental governance in **Senegal** is providing hope that both management can be improved and that conflict over natural resources can be mitigated through negotiated agreements. The 73,000-hectare Pata Forest in southern Senegal has been a source of deadly conflict between indigenous populations and people coming from other parts of Senegal. Through a process mediated by USAID teams, the communities formed a joint NRM monitoring committee and a plan for better communication. No conflicts were reported in 2001.
- Many rural **Kenyan** communities' livelihood options have been severely limited by the ever-diminishing arable land caused by past frequent droughts and dramatic population increases. The NRM program aims to reverse, halt or lessen unsustainable use of natural resources outside the protected areas by working with communities to enhance their abilities to manage their resources more sustainably. The program implemented site specific NRM activities, including organization strengthening, business and financial management, benefit sharing and mentoring to target community-based organizations (CBOs). In 2001 an increase in land area under improved NRM increased to 650,040 hectares from 540,341 hectares, and in number of nature-based enterprises to 41 from 22.
- In **Namibia**, USAID in partnership with the World Wildlife Fund supports a community-based natural resource management program that focuses on helping communities to register as conservancies, organize and effectively run conservancy management committees, establish and implement resource management plans and enter into joint ventures with private sector investors and tour operators. The program introduces economic incentives, supported by sound social, democratic and environmental principles, through effective natural resource management. Conservancy formation has served as a base for politically active civil society. Conservancies have moved rapidly to formalization, with 15 now gazetted, and 34 more communities currently organizing. Almost 4,100,000 hectares of communal land are now under local management.
- In **Tanzania**, USAID's efforts in the environment and natural resources sector directly impact and support the objectives of the CCD. USAID's work on policy development and application have assisted Tanzania's 1997 ratification of the CCD move a step further to the process of domesticating the treaty into the national legal framework. In addition supporting integrated policies, the program supports their application to benefit communities, promote community-based conservation and

improve the health of the environment. Innovative partnerships have recently been established between the environment and private sector programs, thereby strengthening these linkages with increased effectiveness and impact.

- In **Paraguay**, USAID addresses local desertification related issues by strengthening the sustainable management of the Chaco and Pantanal Ecoregions. USAID/Paraguay has supported a local NGO, Fundación para el Desarrollo Sustentable del Chaco Sudamericano (DeSdelChaco), to prepare, in cooperation with local governments and the Environmental Secretariat, the National Action Plan for the implementation of the Convention to Combat Desertification. The program has included capacity building and raising awareness on many aspects of sustainable development issues including: existing land use and production systems; deforestation for the creation of pastureland; maintenance of pastureland; land-use planning and zoning; and, water resources in the Chaco.

INTEGRATED WATER RESOURCE MANAGEMENT

The Global Water Partnership defines Integrated Water Resource Management (IWRM) as “a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.” IWRM has proved to be successful in many cases for the equitable allocation of water resources, often in scarce supply, across a variety of diverse user groups. However, IWRM does not focus solely on water supply; demand management is an equally important element in the IWRM process. Demand management includes improvements in the efficiency of water delivery systems, cost incentives for water conservation, water quality protection, and the reuse of treated wastewater by the agricultural and industrial sectors. Many of these demand management activities are essential to wider efforts aimed at combating desertification. Examples of USAID programs are presented in the following bullets. **For more complete examples please refer to the regional Annex.**

- **Central Asia** is dependent on its principal natural resources, oil, gas, and water, for its economic growth. USAID is providing technical assistance, training, and selected equipment to water managers and/or policymakers in each CAR nation to improve the management of the water resources in these semi-arid and arid nations. Assistance is provided on the national level to National Hydroment Services, Ministries of Agriculture and Water Resources and River Basin Management Agencies in order to better collect, process, and exchange water data. Such data is used for improved planning, allocating and controlling water resources throughout the region.
- To prevent a water-induced crisis in **Morocco**, fundamental changes in water availability and use, based on equitable and transparent decisions involving the participation of community groups, the private sector, and water users associations, are essential. USAID has worked to improve water resources management in the agricultural, urban, and industrial sectors since 1992. These activities include work in the areas of improved irrigation efficiency, watershed management, water quality control, municipal water and sanitation services, and training for municipal officials in financial management and environmental planning.

AFRICA - USAID LESSONS LEARNED IN COMBATING DESERTIFICATION

USAID's Africa Bureau (AFR) has been actively supporting the Convention to Combat Desertification since the conception and negotiation phases of the convention, through implementation and ratification by the USG. At the international level AFR continues to participate actively in the Conference of the Parties,

the Committee to Review Implementation of the Convention, the Committee on Science and Technology and other international fora. At the subregional level AFR supports several organizations such as CILSS and SADC that are involved in the preparation and implementation of sub-regional plans. In the ten years since the Rio meetings, African countries have made promising progress in attacking the causes of desertification. USAID has been a critical partner in many of these cases. Bilaterally, AFR supports a number of country level programs that directly or indirectly address the issues of desertification and land degradation in African countries. In FY01 investments in support of the CCD by AFR (Mission and Bureau) in sub-Saharan Africa were estimated at approximately \$50 million.

The CCD has several characteristics that coincide with and support AFR's approach. It is the most developmentally oriented of the environmental conventions coming out of RIO. This corresponds well with USAID's mandate not only to help protect the world's environment but to spur economic growth and good governance. The CCD encourages a bottom-up approach that USAID has been promoting in the African region for many years. The convention also addresses the roles of major groups such as civil society and the private sector. USAID similarly supports these groups as both engines of growth and as essential for good governance.

The planning and implementation of the Desertification Convention is part of the development context and process. In this context, these investments over the last 20 to 30 years have produced important results in terms of policy changes, management of natural resources, reduced degradation rates, improved livelihoods and better governance.

There are numerous cases where positive trends in terms of environment, governance and economic growth indicate that some countries and regions are on the right path and that investments have produced positive results. In some areas rates of degradation and impoverishment have declined. However degradation and quality of life deterioration continues, particularly in certain areas, sometimes associated with conflict.

USAID Africa Bureau programs have revealed a number of lessons learned, both to USAID and its African colleagues. Several are briefly noted below.

National Will and Capacity – National level commitment and capacity are crucial to implementation of the CCD. One of the important measures of national will to implement the spirit and letter of the CCD is the degree to which the central government shares authority with the rural population over the management of natural resources. Progress has been made on this front in numerous African countries. In sixteen of seventeen countries where USAID has provided support, governments have reformed inappropriately centralized policies and institutions and made progress in moving toward becoming a partner with rural populations in the management of wildlife, forests, habitats, range land and watersheds.

Integration of the National Action Plans - NAPs should build on progress achieved from past initiatives. The CCD should add value and energy to institutions and policies that countries have worked so hard to establish. Efforts to combat desertification should be mainstreamed and not marginalized.

Challenges of the Bottom-Up Approach – Both strong governments and increased local participation are needed to fight desertification. Organizing and unleashing local initiative and potential is difficult and has transaction costs. However, mechanisms are being developed and refined for assuring local control and authority. USAID partners helped to develop democratically elected, business-oriented community-based organizations (CBOs) that negotiate management plans with government institutions and then ensure that those agreements are followed. Since they are organized on a business basis, the CBOs help the local populations maximize local benefits from responsible management. These community organizations have become models for effective local governance where local populations

share both authority and responsibility with the national government for the stewardship of natural resources

Measuring/Indicators/Monitoring and Evaluation – Anti-desertification activities require learning and adaptation. For this to be effective, monitoring and feedback are needed. The CCD has put significant effort into the area of benchmarks and indicators. Further work is needed on socio-economic and governance indicators as well as strengthening feedback mechanisms. One of the major problems for the sector has been quantifying and reporting results. With current accounting methods, it is difficult to capture the results in national statistics or satellite imagery using current approaches. However, thanks to the release of high-resolution satellite imagery and Geological Information Systems (GIS), it is now possible to more effectively compare and contrast change overtime. The Famine early warning system is another monitoring success story. Since the establishment of this program, no country, even those suffering important droughts, have had a famine.

Economic and Financial Issues – In many instances good land husbandry will not take place unless the economic incentives are right. In numerous cases economic reforms have led to better land management but attention still needs to be paid to long-term management versus short-term gain. Although some progress has been made on financial instruments to support desertification activities, more needs to be done to develop innovative and sustainable mechanisms. Recognizing that policy reforms that share authority and responsibility are necessary but not sufficient, USAID helped pioneer approaches that linked responsible management with improved livelihoods.

Knowledge Management – Strategic environmental decision-making depends on sufficient good quality information and the ability to analyze and process this information. The ability to share information and knowledge and to apply it to problems is central to attempts to fight desertification.

African Ownership – Desertification in Africa can only be addressed by millions of Africans taking daily individual and group decisions and actions. Africans have to own and take responsibility for desertification. The CCD has been very productive in promoting African ownership.

Importance of Governance – The ability to fight desertification depends to a large extent on the local governance context. Property rights (security of access to resources and the ability to exclude) as well as procedural rights (access to environmental information, decision-making processes and justice) provide the essential foundation and enabling conditions on which people make decisions on investing in the environment. Well functioning democratic countries tend to be resilient to famines and perform better in fighting desertification.

FY01 FUNDING RELEVANT TO IMPLEMENTING THE OBJECTIVES OF THE UNCCD

Table I. FUNDING BY REGION

Africa	53,771,400
Asia	17,766,500
Latin America and Caribbean	12,682,100
Central and Eastern Europe	850,000
Global ¹	8,700,000
TOTAL REGIONAL FUNDING	\$93,770,000

¹ CGIAR funding not dis-aggregated by region

Table II. Funding by Activity (data from Table I sorted by main subject focus)

Agriculture Development	9,748,950
Improved Agriculture Practices	13,120,000
Biodiversity	5,952,500
Biodiversity /Natural Resource Management ¹	9,058,550
Agriculture ² / Natural Resource Management	12,900,000
Natural Resource Management	17,300,000
Forestry	720,000
Early Warning Systems & satellite monitoring ³	7,200,000
Integrated Water Resource Management	16,250,000
Water re-use for Agriculture	1,400,000
Water and Energy Efficiency Improved	120,000
Total	\$93,770,000

¹ Programs have a significant amount of biodiversity activities in addition to other NRM activities

² Programs primarily Agriculture-based Natural Resource Management

³ Includes \$6m for FEWs-NET

ANNEX - PROGRAM AND ACTIVITY DESCRIPTIONS

AFRICA – (from USAID Africa , and Asia and Near East regions - bi-lateral, regional, and Washington-based programs)

EGYPT

SO 263-018: Access to Sustainable Utility Service in Selected Areas Increased

FY01: \$1.4m

USAID is currently managing a wastewater portfolio valued at about \$743 million, a small percentage of activities focus on the re-use of effluent from wastewater treatment plants (WWTP)s for agriculture. Two activities funded in FY01 are outlined:

USAID/Cairo is funding the construction of two WWTPs that generate approximately 860 m³, and 16,000 m³ of treated effluent per day in Aswan, Egypt. The treated effluent will be used to irrigate 420 acres, and 3,100 acres plots of desert land under agriculture. Effluent re-use share of the FY01 funding level: \$0.6 million.

In Nuweiba USAID/Cairo is funding the construction of two WWTPs that generate approximately 4,200m³ per day of treated effluent. The treated effluent will be used to irrigate 250 acres of desert land under agriculture. The effluent re-use share of the FY 2001 funding level was \$0.8 million.

ETHIOPIA

SO7: Rural Household Production and Productivity Increased

SpO 12: Improved Livelihoods for Pastoralists and Agropastoralists in Southern Ethiopia

FY01: \$1.17m spent for combating desertification

Under SO 7, soil and water conservation measures were supported and planning was made for the new Strategic Objective that will focus on watershed management. The SpO achieved progress in mitigating conflict over ranges by providing pastoralist groups with new skills to prevent conflicts.

GUINEA

SO 1: Increased Use of Sustainable Natural Resource Management Practices

FY01: \$5.123m of which approximately \$3.0m addresses desertification concerns

The SO assisted Guinea in achieving results that contributed to reduction of forest degradation, reduction of soil erosion, improvements of peoples' livelihoods, and stronger local governance over management of natural resources.

Forest Management: Forest degradation is a serious challenge to the economic future of Guinea and is aggravated by slash-and-burn farming, clandestine timber exploitation, and uncontrolled wildfires. With limited resources and technical capacity for addressing these ever-increasing challenges, the GOG adopted a co-management approach that allows local populations to share the responsibility for and the benefits of managing the classified forests.

By the end of 2001, three classified forests covering 50,374 hectares were under co-management plans mutually agreed upon by five democratically-elected inter-village committees and the National Department of Forest and Waters (DNEF). Under these plans local populations are empowered to rationally manage their communal resources, to obtain legally recognized rights over the forests, and to apply democratic principles in decision-making. (The *quid quo pro* is that the management plans meet technical criteria to ensure sustainable yields.) However, ‘empowering’ people living on the margin really starts to make sense, when the empowerment leads to improved livelihoods and to reduced feelings of helplessness over management of the natural resources base. A major step was achieved in linking responsible management with improved livelihoods as revenue-generating activities were initiated by six community-based organizations (CBOs) after their plans to manage 519 hectares were approved.

In addition to supporting co-management of classified forests, the SO supports the National Sustainable Tree Crop Network that helped create 90 producer groups, and train 407 producers in cashew production and 368 in marketing. Other villagers were assisted in establishing 531 hectares of oil palm and coffee plantations while simultaneously conserving the existing natural forest cover.

Other significant results were achieved that improved the prospects for future benefits going to local communities. In 2001, 32 village management committees were created and assessed as functional while 24 natural resource management plans were successfully implemented, exceeding targets. In order to ensure that the legally-recognized CBOs are democratically-run and business based, the SO provides organizational and enterprise-management training. The SO also places strong emphasis on the participation of women given their important role in the rural economy, and in ensuring household food security. Under the ENRM activity, women accounted for 43% of farmer leaders trained in natural resource management planning, and 34% of the membership of village-based natural resource management committees.

KENYA

SO 5: Improved Natural Resources Management in Targeted Biodiverse Areas by and for Stakeholders
FY01: \$3.2m of which about \$3m addresses desertification concerns

The objective of the natural resources management (NRM) program is to reverse, halt or lessen unsustainable use of natural resources outside the protected areas by working with communities to enhance their abilities to manage their resources more sustainably. Working in selected wildlife, forestry, rangelands and marine areas, the program provides incentives to communities to change their behavior in managing natural resources. These changes should lead to more responsible uses of natural resources and eventually reduce threats and pressures on resources.

The most significant program achievement in 2001 was the attitudinal change towards the environment due to increased awareness of conservation incentives among the target communities. This led to an increase in land area set aside for NRM activities to 650,040 hectares from 540,341 hectares in 2000, and in number of nature-based enterprises to 41 from 22 in 2000. The number of stakeholders benefiting from the USAID-supported NRM activities increased substantially from 15,715 in 2000 to 26,858 in 2001.

Communities and private landowners in 9 separate conservation sanctuaries legally set aside 92,100 hectares of land as wildlife habitat, buffer zones and water catchment areas. This came as a result of some 862 stakeholders directly receiving funding, training, technical or commodity benefits attributed to the program. Another 11,143 stakeholders benefited indirectly by being shareholders in an enterprise that was either created or received technical support. The program implemented site specific NRM activities, including organization strengthening, business and financial management, benefit sharing and mentoring to target community-based organizations (CBOs).

The USAID-funded NRM Enterprise Development Fund (EDF) supported 19 businesses in 2001, bringing the total number of successful initiatives supported to 41. USAID supports joint investment deals between communities and private sector and strengthens the management and marketing activities for nature-based businesses. Ten community group ranches were assisted to make partnership deals with private sector. As a result, the private sector invested US\$ 22,500 in community businesses, to supplement the program's EDF funding of \$67,725 during the reporting year. An additional EDF funding of \$491,034 was approved for community businesses in 2001. The total income earned by the communities was \$122,494 and 112 jobs were created, providing \$80,430 in incomes. The program successfully leveraged the Ford Foundation, United Nations Development Program (UNDP) and the European Union's Biodiversity Conservation Program to invest more funds in conservation projects.

USAID support in the establishment of natural resources conservation constituencies saw the creation of 3 new regional wildlife fora, strengthening of NRM advocacy activities in two other existing fora and provision of technical services to 27 CBOs. A network of CBOs from across the five focal areas, known as CORE-NET, now produce and circulate a nation-wide newsletter for sharing conservation information, creating awareness and exchanging ideas.

This NRM program benefits pastoral, agro-pastoral and agriculturist communities living in the five program focal areas. These communities' survival options have been severely limited by the ever-diminishing arable land caused by past frequent droughts and dramatic population increases. This has brought about serious conflicts between human beings and between human and wildlife, leading to unsustainable use of natural resources. The program provides these communities with suitable incentives and technologies that improve livelihoods, enhance the value of natural resources and minimize conflicts.

MADAGASCAR

SO3: Biologically Diverse Eco-Systems Conserved in Priority Conservation Areas

FY01: \$9.183m of which approximately \$3.0m address desertification concerns.

Beginning in 1998, USAID broadened its approach beyond protected area networks to landscapes or eco-regions with a greater emphasis on linking conservation of biodiversity with improved livelihoods and regulations. Overall, these investments have improved the lives of over 31,300 rural families with community forest management, agricultural extension, market access, and cyclone recovery assistance.

In the forest sector, loss rates in USAID-supported zone (2.6% and 3.5%) are substantially lower than in comparable non-intervention zones (6.7%). By last year Madagascar's respected national park system had placed 1,716,469 hectares of biodiversity-rich land under protection. This represents 8% of Madagascar's territory, up from 4.7% in 1989. To help pioneer approaches to addressing biodiversity and degradation threats, USAID placed natural resource management squarely in the hands of rural communities. With the support of pilot activities, seven forest management contracts and seven land use agreements were signed between local community associations and the Ministry of Water and Forests. Management of 22,576 hectares of forest was transferred while another 50,360 hectares will soon be transferred to communities. Other communities have requested that an additional 114,000 hectares of forest be transferred to them. Transfers have benefited over 1,000 rural associations.

Associated with the above the USAID linked poverty reduction, rural development, trade, natural resource management, and disaster mitigation within an eco-region-based conservation and development approach by helping over 15,300 farmers in 575 farmer associations. The producers adopted sustainable production techniques, abandoned slash and burn farming, stabilized cyclone vulnerable hillsides along roads and rails, and took responsibility for road and rail maintenance. Farm yields increased from two to

10 times, depending on crop. The SO is linking farmers near biodiversity rich habitat to international markets for environmentally sensitive products like essential oils.

USAID support helped to create participatory regional planning structures in four eco-regions. This advocacy approach has improved watershed management in Fianarantsoa. The Tamatave Province developed a regional environmental strategy and a provincial environmental information system, review legal issues on environmental decentralization, and design and initiate provincial capacity building. A public review in which over 2,000 Malagasy attended ensured transparency

To help improve prospects for sustainable financial support, USAID assisted the Malagasy Sustainable Financing Commission to identify financing instruments, from trust funds and debt swaps to environmental fees.

USAID leveraged resources to broaden environmental conservation. The Landscape Development Intervention activity attracted more than \$1.25 million in private investments by environmentally friendly enterprises in eco-lodges and agro-processing. Trade mission participants report they are pursuing more than \$10 million in sales. USAID influenced a new World Bank - GOM rural development program to link over \$70 million in production credits to abandoning slash and burn farming.

MALAWI

SO 612-002: Increased Sustainable Use, Conservation, and Management of Renewable Natural Resources

FY01: \$3.5m of which \$3.2 address desertification issues

The program's focus is extending improved natural resource management technologies to more than 80% of the rural population that depend on a natural resource base for their livelihoods and growth. The number of farmers adopting improved soil conservation practices and sustainable natural resource management has significantly increased over the years.

The Project has contributed greatly to improved soil conservation practices and enhanced soil fertility in Malawi. The Malawi Agroforestry Extension Project (MAFE), implemented through a cooperative agreement with Washington State University (WSU), has had success in introducing technologies that control runoff and soil erosion. In 2001, 52,000 farm families adopted improved soil conservation practices, including *vetiver* contour strips. The number of hectares where improved soil conservation practices were being undertaken was 14,316.

Some 31% of farm families participating in soil conservation/soil fertility practices were female-headed households. The number of farm families adopting improved soil fertility practices was 153,256. The number of hectares where such practices are being applied grew to 34,109. The improved soil fertility practices include "dispersed systematic inter-planting" of *Faidherbia albida* and sowing *Tephrosia vogelli* with maize. The revival of these traditional practices has helped boost maize yields. In addition, when the trees themselves are harvested, they provide a source of firewood, building materials, and high quality fodder from nutritious seed pods.

Through the Community Partnership for Sustainable Resource Management (COMPASS) activity, USAID/Malawi has worked directly to help communities adopt community-based natural resources management (CBNRM) practices such as tree planting, conservation of natural forests, beekeeping and fish farming. The number of communities adopting CBNRM practices in target districts grew to 315. The proportion of customary land where CBNRM is carried out was 18% in 2001.

Increased community and private sector participation in natural resource management led to some notable successes, largely as a result of the policy reforms. Changes in fishing laws have induced fishermen and women around Lake Chilwa, Lake Malombe, Lake Chiuta and the southern part of Lake Malawi to form village beach committees (VBCs). These VBCs work with Department of Fisheries personnel to develop a management plan for their local fishery. Each VBC has also developed by-laws that complement government rules and regulations and are enforceable within VBC's area of jurisdiction. A similar arrangement is in place in forest areas where Village Natural Resources Committees (VNRC) are increasingly working with the Forestry Department to make joint decisions on utilization of forest resources.

Despite the successes in policy reforms in Fisheries, Forestry and National Parks and Wildlife sector, progress on enacting and implementing other legislation to improve natural resource management is slow. After a flurry of activity in which five new policies were drafted, several pieces of important legislation still remain to be enacted into law. Pending legislation before Parliament includes: Water Resources Management, Land Resources Management, Wildlife and Land Act.

MALI

SO2: Increased value-added of specific economic sectors to national income

FY01: \$5.345m of which about \$3m address desertification issues

Mali's attacked desertification by helping the Malian government and producers in the Office of the Upper Niger River Valley (OHVN) establish conditions leading to reduced soil and forest degradation in the OHVN.

The number of farmers in the Office of the Upper Niger (OHVN) area adopting improved natural resource management (NRM) practices to increase production and protect the resource base continues to grow. This past year an additional 1,177 farmers adopted new practices leading to agricultural stabilization and decreased forest degradation. Over 33,000 farmers have now adopted these practices. Not only have these practices substantially increased yields, they have also helped farmers reclaim land and reduced pressure to clear new lands.

In addition to the spread of more efficient land-use management practices, some communities in the OHVN have also taken control of the management of local forest resources. Initiated by twelve communities that negotiated agreements with the Forestry Service about ten years ago, these plans stipulate that the State would no longer issue wood cutting permits to wood merchants from outside the community. As a *quid pro quo* the community would restrict the use of wood to their own domestic use. Results from a recent assessment by the U.S. Geological Survey showed that the rate of forest cover loss decreased in eight of nine selected communities. (In two communities, forest cover in 1999 was shown to be greater than in 1988.) Other data showed that crop production levels in these communities increased over the same period of time resulting in a win-win result: improved livelihoods, reduced degradation! Moreover, these data provide evidence that communities can be effective stewards of their forest resources and that co-management can be a viable option to centralized control.

In assessing program activities that contributed to communities investing in impact-producing NRM systems, we would note the role of democratically-elected and business-based Village Associations (AVs). The AVs successfully negotiated the co-management agreements with the Malian Forestry Service and then provided the organizational structure to ensure that the agreements were maintained. They also were instrumental in helping producers gain access to markets and capital that helped them to intensify.

In addition to the results produced in the OHVN an USAID-supported U.S. PVO showed impressive results through its promotion and sales of efficient wood burning stoves. The number of stoves sold this year (14,447) gained only slightly over 2000, however the total number of stoves sold so far (44,865) has saved about 17,000 hectares of forests because of improved efficiency and economies (about 6,000 hectares saved in 2001) and reduced CO2 emissions by 147,997 tons (47,696 tons in 2001).

MOROCCO

SO 08-006: Improved Water Resources Management in the Souss-Massa River Basin,

FY01: \$1.5m

To prevent a water-induced crisis in Morocco, fundamental changes in water availability and use, based on equitable and transparent decisions involving the participation of community groups, the private sector, and water users associations, are essential. USAID has worked to improve water resources management in the agricultural, urban, and industrial sectors since 1992. These activities included work in the areas of improved irrigation efficiency, watershed management, water quality control, municipal water and sanitation services, and training for municipal officials in financial management and environmental planning. The keystone of this objective is the 1995 law decentralizing financial and planning authority for water resources to river basin agencies (RBAs). USAID/Morocco is taking advantage of this law to accelerate activity implementation by strengthening a partnership for water management among public and private groups in the Souss-Massa River basin.

Activities including dissemination of management and technical practices from previous water projects, including appropriate irrigation technologies, water conservation measures, soil erosion control, municipal water and sewerage provision, and participatory approaches to design, implementation, and management.

NAMIBIA

SO 673-003: Increased benefits received by historically disadvantaged Namibians from sustainable local management of natural resources

FY01: \$3.8m of which all addresses dryland and desertification issues

The program has been a widely recognized success in making progress toward its objectives. Through a cooperative agreement with the World Wildlife Fund, USAID has supported a community-based natural resource management (CBNRM) program that has focused on helping communities to register as conservancies, organize and effectively run conservancy management committees, establish and implement resource management plans and enter into joint ventures with private sector investors and tour operators. The program was designed to introduce economic incentives, supported by sound social, democratic and environmental principles, through effective natural resource management. In the process of helping to set up and establish nature conservancies, USAID has also strengthened the local NGOs that have been a critical piece of the CBNRM movement and the Ministry of Environment and Tourism, which has oversight responsibility for conservancies.

The enactment in 1996 of an amendment to the Namibian Nature Conservancies Act of 1975, which occurred with USAID assistance, shifted the rights and responsibilities of managing communal wildlife from the government to communities. This policy provides Namibia with one of the most progressive policy environments for CBNRM in Southern Africa. This policy and all other Ministry of Environment

and Tourism policies related to natural resources are currently under review and revision to streamline and further improve MET's implementation. Highlights taking place during this reporting period include:

Economically-Viable and Well-Managed Conservancies: Conservancies have moved rapidly to formalization, with 15 now gazetted, and 34 more communities currently organizing. Almost 4,100,000 hectares of communal land are now under local management. While this indicator and the number of participating members (more than 32,000) are slightly below targets for 2001, conservancy development is happening at an exceptional pace, which is expected to continue. Income and benefits amounted to \$785,153, which is almost double last year's figures and is 230% over target. As well, the diversity of income sources (i.e. community enterprises, joint venture tourism, thatching grass, trophy hunting, live donations, craft sales) is a major strength of USAID's program. Cash income to conservancies members is also up from \$60,611 last year to \$159,260 in FY 01. Overall revenues to conservancies are starting to allow conservancies to cover their own operating costs. Two conservancies have been able to fund community development projects.

The private sector is becoming actively involved in most established and emerging conservancies. In FY01, nine partnerships with the private sector were operating including campsites, lodges, and hunting concessions. Small entrepreneurs (tire repair, craft sales, beverage stops) have also developed in and around these major partnerships. Joint ventures between investors and the community have proven satisfactory and provided benefits on both side of the equation. Tourism and related activities are a major source of full- and part-time employment for 500 Namibians and another 300 who benefit from handicraft production and sales, and 700 people benefiting from unskilled seasonal employment. Based on a thorough month-long assessment of LIFE, there is an estimated potential of a 10-fold expansion of income from increased tourism.

Sustained growth in conservancy income from tourism will depend on increasing wildlife numbers. Already, massive increases in wild animal populations are resulting from stocking activities, active monitoring by conservancy game guards and increased awareness of members of the importance of wildlife. Beyond increasing tourism potential, a well-manage wildlife population is also contributing to food security among communal residents who benefit from game off-take.

Women play a key role in natural resource management. Women trained as resource monitors are regularly evaluating biomass in conservancies, especially palm for basket making and grasses used for local thatching and commercial thatch sales. Overall, 25% of all elected conservancy management committee members are women, and one conservancy has a women's desk to promote enterprise activities. This is well above the average level of women's participation in rural committees.

Conservancy formation has served as a base for politically active civil society. All registered conservancies, as well as 50% of emerging conservancies, have received training and mentoring in priority setting, decision-making and conflict mediation. All gazetted conservancies have annual membership meetings and hold open and transparent management committee elections. All conservancies have used these skills to resolve issues around boundaries, member responsibilities, management plans with their traditional and elected leaders.

Namibia institutions took several steps forward in assuming responsibility for sustained CBNRM growth. The national office of Namibian Association of CBNRM Support Organizations (NACSO), representing 12 NGO support organizations, is now fully functional and operates independently of USAID's implementing organization, World Wildlife Fund (WWF). The MET has established a CBNRM Subdivision within the Directorate of Parks and Wildlife Management.

SENEGAL

SO1: Sustainable Increases in Private Sector Income-Generating Activities in Selected Areas and SO2: More Effective, Democratic, and Accountable Local Management of Services and Resources in Target Areas.

FY01: \$5.104m of which \$2.5m is from the ENV fund—all \$2.5 million address desertification issues

Environmental Governance. Strategic Objective Two supported the Senegalese decentralization process by helping to build the capacity of Rural Communities (local government units comparable to rural counties) to prioritize local issues, to govern democratically, and to mobilize and manage local resources to address development needs. The Environment sector was the first to be decentralized by the Government of Senegal (GOS) under the Decentralization Law, confirming the importance of natural resources management authority being shared between national and local institutions. Supporting decentralization, USAID's Community-Based Natural Resources Management (CBNRM) program, completed in 2001, helped 85 (out of 380) Rural Communities to develop democratic approaches with particular emphasis on transparency, communications, democratic procedures, and participatory methods).

The CBNRM focused on strengthening good governance through NRM issues. It assisted 13 rural communities to develop and implement land use management plans covering 1,576,500 hectares. The CBNRM program helped partner communities develop capacities to establish and implement democratically-based management plans. The development of transparent decision-making approaches was central to the approach. Last year elected officials in the 13 local governments initiated 124 consultations with the population at a variety of fora—town meetings, planning meetings, technical sessions, etc. (The CBNRM committees, because of their transparent approach to policy making and implementation, served as models in the development of other local government institutions.) Women have been particularly important in the with regard to local resources planning and management and women in particular are increasingly assuming leadership roles in managing the communities' natural resources. Last year, elected officials

As an example of the importance of building local capacities to manage natural resources and mitigate conflict, the SO 2 helped two communities resolve conflict over land-use in the 73,000 hectare Pata forest in southern Senegal. The conflict was serious; two people had been killed in fighting between the two communities. Following on last year's participatory exercise, the communities negotiated an action plan for sustainable management in the forest. The action plan created a NRM monitoring committee involving the population, local organizations and local government officials and called for the establishment, training and equipping of forest surveillance committees in the 15 villages involved and the development of a plan for better communication. The action plan was implemented, with USAID support, and not one conflict was reported to the President of the Rural Council in 2001. USAID supported the application of a similar approach to help resolve a serious conflict between fishermen and gill-netters in Kayar, the major fish-landing site in the country. The exercise involving all stakeholders led to the resolution of the conflict and a strategy for developing a sustainable and consensual fishery management in Kayar.

Income-Generating Activities. While SO1 focused primarily on urban-based activities, it did support 51 manufacturers of fuel-efficient stoves who sold 14,674 units generating \$134,000. The SO1 also promoted vetiver (anti-erosion grass) as a micro-enterprise opportunity. The team helped to establish 14 demonstration sites and supported 63 nurseries in marketing soil-erosion technologies.

TANZANIA

SO 8: Improved conservation of wildlife and coastal resources in target areas
FY01: \$2.535m Funding for dryland areas

The program benefits the global environment by safeguarding biological diversity, and environmental tourism contributes significantly to the growth of the economy. Important milestones were reached in three key areas: community-based conservation, coastal resource conservation, and protected area management. Prospects for continued program progress are also extremely encouraging.

Donor coordination on environmental issues remains excellent and USAID/T is at the forefront. USAID now chairs both the Environment Sector donor group and the Wildlife Donor Forum. With initiation of its new wildlife policy implementation program, USAID has also taken the lead in coordinating application of WMAs.

The Convention to Combat Desertification (CCD) was ratified by Tanzania in 1997. The convention requires member states to formulate and subsequently implement National Action Programs (NAPs) to Combat Desertification using participatory bottom-up approaches. Tanzania has the NAP in place (since August 1999), implementation of which is within the context of sustainable development and Tanzania's vision 2005. The program links very closely with other ongoing initiatives and ongoing programs and is being implemented as an integral part of the sustainable natural resource use and development processes at all levels.

USAID/Tanzania's work in the environment and natural resources sector directly impacts and supports the objectives of the CCD. The work on policy development and application directly moves the 1997 ratification a step further to the process of domesticating the treaty into the national legal framework. The program seeks not only to enact policies but also support their application to benefit communities, promote community-based conservation and improve the health of the environment. Innovative partnerships have recently been established between the environment and Private sector programs in recognition of strong linkage between the two, for increased effectiveness and impact. Under the arrangement a micro-enterprise-based sustainable agriculture project has been co-funded. A similar arrangement has enabled co-funding of an environmental advocacy project by the NRM program and the Democracy program.

Specific activities directly in support of the CCD objectives that were implemented in FY01 are listed along with their corresponding financial details: Partnership Options for Resource-use Innovations (PORI 1,2,3) project --\$840,000; Ugalla Community Conservation Project--\$500,000; Interpretation and Infrastructure for Tarangire and Lake Manyara National Parks-- \$720,000; Tarangire National Park Project -- \$400,000; Partnership for Biodiversity-- \$75,000.

UGANDA

SO 617-002: Critical Ecosystems Conserved to Sustain Biological Diversity and to Enhance Benefits to Society

FY01: \$7.396m of which \$3.5m is relevant to desertification

USAID/Uganda's environment and natural resources program seeks to improve ecosystem management, reduce human pressure on fragile ecosystems, and contribute to a conducive policy environment for conservation and sustainable development. USAID has supported the development and implementation of

sustainable management plans for over 49,000 square kilometers of land. The Mission's partners have planted nearly 6.5 million trees, curbing erosion and reducing losses of forest cover.

Uganda's rapid population growth rate (2.9% per year), high density of population in areas adjacent to the major protected areas, and high levels of poverty are significant challenges to successfully reducing human impact on fragile environments. In response to these challenges, USAID has implemented an integrated program of research, on-farm trials, nursery development and dissemination of tree germplasm in two densely populated highland agricultural zones. Collaboration between USAID partners the International Center for Research in Agroforestry (ICRAF), Agro-Forestry Research Network for Africa (AFRENA), Africare, and Heifer Project international (HPI) has assisted farmers to establish fodder banks, boundary plantings, and rotational woodlots to improve soil fertility and reduce erosion, and to grow trees on-farm to enhance food security through cash earnings and increased productivity. An independent evaluation of the AFRENA program (2001) concluded that it had contributed directly to sustainable production, higher productivity of land, income generation and environmental protection by reducing runoff and consequent erosion by as much as 70%.

USAID's efforts have also contributed to establishing and implementing policies and strategies for development through conservation and anti-degradation techniques. The program works at local government level to develop Environmental Action Plans (EAPs) by and for parishes, sub-counties, and districts. This is a bottom-up, participatory planning process, as advocated by the CCD, which involves all local government staff from different sectors in development planning and mainstreaming environment into district operations. The process has changed the thinking of participating local governments and has built their capacity to develop District Development Plans, with budgets that include District EAP implementation. NGO partners working in the areas of environmental justice, accountability and advocacy targeted key areas such as land rehabilitation and improving the environmental impact assessment (EIA) process. According to an evaluation of the program conducted in May 2001, these advocacy campaigns have been highly successful in influencing environmental policies and legislation.

ZAMBIA

SO 611-001: Increased rural incomes of selected groups

FY01: \$6.625m of which \$0.966m is environment funds. About \$900,000 addresses desertification concerns

Rural incomes of selected groups continue to increase and the overall policy environment for trade and investment in rural and semi-urban areas is improving. This program stimulates private sector-led growth in selected areas of Zambia's rural economy, and the potential for sustainable cultivation of food and high value exports is high. The beneficiaries are farmers and rural non-farm enterprises (RNFE), who depend upon the natural resource base for their employment and incomes. During FY2001, USAID investments resulted in increased private sector demand for new technologies, market links between producers and buyers, liberalized trade policies and an improved environment for investment in rural Zambia.

Small scale farmers and RNFEs incomes increased by 11.5% (target 20%) to \$8,608,738 in 2001. The drought in parts of the country and an above average rainfall and flooding in other areas caused major food deficits and declines in agricultural production and had a negative impact on related income generation. A range of improved technologies and management skills were provided through USAID's program. These include diversified cropping, organic farming, fallow technology, conservation farming and natural resource management. The number of farmers benefiting increased to 59,071 (exceeding the target of 40,000), of which 45% were women. Steady progress is being made by USAID partners in assisting farmers to diversify into new cash crops with higher gross margins and yields and to food security crops requiring less inputs and labor. The latter is particularly beneficial to farmers affected by

HIV/AIDS. Crops such as sunflower, maize, cowpeas, groundnuts, sorghum, paprika, soya beans and cassava promoted under this program have increased yields and show great potential for sustainable incomes to small farmers. In addition, by end September 2001, there were 39 large-scale organic farmers and 3,100 smallholder farmers with certification and covering more than 19,688 hectares of organic production.

In addition to progress at the farmer and business level, there was significant progress at the policy level, which improved Zambia's economic environment. During 2001, the value of non-traditional agricultural and natural resource exports rose to \$300 million. Efforts helped improve government's and private sector's capacity to achieve World Trade Organization (WTO) legal and regulatory compliance and assisted in the analyses and formulation of negotiation positions for the WTO Ministerial meeting held in Doha in November 2001. Particular emphasis was placed on added value of horticultural and floricultural products, Zambia's fastest growing non-traditional export.

REGIONAL CENTER FOR SOUTHERN AFRICA (RCSA)

SO 690-012: Increased Regional Cooperation in the Management of Shared Natural Resources

FY01: \$2.976m of which \$2.5m benefits desertification activities

This program is focused on improving the management of shared natural resources and wildlife through the establishment of transboundary natural resource management areas where two or more countries share the same natural resources and wildlife. When complete, an estimated 35 million hectares will be jointly managed for the sustained economic benefit of the more than three million residents of the targeted transboundary areas who depend on subsistence agriculture, fishing and eco-based tourism for their livelihoods.

Mozambique, South Africa and Zimbabwe signed a declaration of intent to establish the Great Limpopo transboundary area and reached consensus on a draft treaty. The RCSA assisted in drafting the Great Limpopo Transfrontier Area Management Plan, which the Heads of State of the three countries are expected to formally adopt in April 2002. The Four Corners transboundary area is a community and private sector initiative that builds on previous USAID-funded activities in Botswana, Namibia, Zambia and Zimbabwe.

The RCSA-funded Networking and Capacity Building Initiative for Southern Africa, managed by the International Conservation Union's Regional Office for Southern Africa, assisted Mozambique and Zimbabwe to formulate national policy guidelines for managing shared natural resources. This cooperation resulted in a unique community-based model of collaborative transboundary natural resource management in ZIMOZA, a new transboundary area involving Mozambique, Zambia and Zimbabwe. The Ministers of Environment from the three countries reached consensus on a declaration of intent to establish the transboundary area.

The African Wildlife Foundation (AWF), a USAID grantee, provides business development services to five community-based conservation business partnerships in the Four Corners area. The AWF is collaborating with the Regional Tourism Organization of Southern Africa to include potentially viable community tourism initiatives in a regional tourism marketing strategy. Communities in the Four Corners area are conducting a wildlife census in preparation for the upcoming hunting season, and the government of Namibia has officially endorsed community-level wildlife monitoring. A partnership between the Mahenye community, the Zimbabwe Sun Hotel and the government of Zimbabwe is operational in the Great Limpopo.

Effective management of natural resources requires accurate and timely monitoring. SADC is promoting GIS technology for use in a regional environmental monitoring program, the major component of which will be a regional environmental database managed by SADC. The Education, Democracy and Development Initiative supports a partnership between the University of Botswana and seven universities in the United States. The activity is building the capacity of the Harry Oppenheimer Okavango Research Center to conduct wetlands research and provide data to researchers and planners in the region. The Center is now providing GIS data on the Okavango Delta to the Four Corners initiative.

WEST AFRICA REGIONAL PROGRAM (WARP)

SO 6: Food Security and Natural Resources and Environment Management Program

FY01: \$7.626m of which \$7.0m is relevant to desertification

The Food Security and Natural Resources and Environment Management Program's outstanding achievement since its creation more than a decade ago, has been helping the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) to create the mechanisms needed to avoid a major food crisis in the Sahel. Achievements in FY 2001 included:

Support to AGRHYMET, and its sister organization, INSAH (Institut du Sahel) to quantify and monitor trends in natural resources and land use practices in four study areas in Burkina, The Gambia, Mali, and Niger. USGS/EROS scientists worked with AGRHYMET and INSAH to complete time-series maps of land use and land cover of the four study areas, as well as to help strengthen CILSS's capacity to use new tools. Trend analyses indicated the expansion of agricultural lands at the expense of natural vegetative cover (However, in the OHVN region of southern Mali, the team found evidence of land use stability since the mid 1980's – increasing yields and little or no expansion of agricultural area – indicators of agricultural intensification). The time-series maps attracted the attention of Malian President, Alfa Konare (he is also currently President of CILSS) who is interested in their application as a tool in support of rural development and natural resource management at the commune level.

Serving as the midwife in the development of a consistent regional approach for measuring vulnerability (to famine), for executing vulnerability assessments (VAMs) for high-risk populations in the CILSS region, and for showing that previous balance sheets underestimated available food supply because it excluded non-traditional foods. The more accurate count should help to reduce the number of people in the region who are defined as “structurally [versus temporarily] food insecure

A regional forum on local governance and management of natural resources in October 2000. Approximately 130 delegates reviewed achievements as well as the important lessons that have been learned in the region re community based natural resources management. Forum participants also set a common agenda for furthering the decentralization process as it relates to managing the natural resource base. Among the participants in these activities were grassroots organizations including those representing Sahelian women. Particularly well represented were the West Africa Farmers Network (ROPPA) and the Network of Sahelian Women (REFESA), two of WARP's key regional partners.

REGIONAL ECONOMIC DEVELOPMENT SERVICES OFFICE (REDSO)

FY01: \$800,000 for desertification issues

REDSO has been supporting the strengthening of key institutions such as the Intergovernmental Authority on Development (IGAD), which is demonstrating enhanced institutional capacity after about seven years of support under the Greater Horn of Africa Initiative (GHAI) and Horn of Africa Support Project. IGAD is a lead organization in addressing desertification in the region, and has taken the lead in

trying to establish a regional framework for Partnership and Capacity Building to Combat Land Degradation and Poverty Alleviation in the sub-region, working with UNCCD.

REDSO, through GHAI and HASP has:

- o helped IGAD members collaborate on regional and global trade, sponsoring workshops to help delegates prepare for international negotiations. As a result of these workshops, other developing countries found IGAD delegates at the World Trade Organization negotiations among the best prepared and most collaborative. IGAD staff are more confident they can organize and host future training programs in trade and other sectors;
- o supported an initiative with several CRSPs to develop arid and semi-arid high-yielding crops, which is now developing into a program on promoting sustainable production of drought tolerant high-yielding crop varieties;
- o supported further design of IGAD's Water Resources Management (8.1) and Natural Resources Management (8.2) projects; and worked with IGAD on next steps related to the development of a regional food aid code of conduct. IGAD is also working with the EU on the design of its regional Livestock Project (6.2) and with the Dutch and Swedish Governments on its Environmental Education Project (7.1);
- o supports the Drought Monitoring Center as a specialized technical center of IGAD, with the collaboration of the World Meteorological Center;
- o funded an assessment of the promotion of CBNRM in the region; and
- o through the GHAI, IGAD improved our regional partners' access to information. To date, over 70 government ministries in IGAD member states have Internet connections, allowing users to access and exchange information on food security and conflict work.

REDSO is also very actively working on coordination of pastoral initiatives in the region, with a primary focus on regional livestock trade linkages. To some extent, the Regional Conflict Prevention and Mitigation team is also focusing on the cross-border pastoral conflict-related issues. REDSO is also supporting a regional analysis of the ecological roots of conflict.

We also, with OFDA and REDSO/FS Office funding, have been supporting the FEWSNet efforts to address drought-related vulnerabilities in food security.

AFRICA BUREAU OFFICE OF SUSTAINABLE DEVELOPMENT

SO 698-017: Improved Environment and Natural Resource Management Systems

FY01: \$7.9m of which \$4m is relevant to desertification

Since natural resources are a major source of wealth and power, the program and its partners continued to strengthen the critical links between natural resources management (NRM), improved livelihoods and economic growth, and good governance. These efforts involved giving support to field missions and non-presence countries, strengthening communications support to African researchers and research networks, and developing new analytical tools. The program directly assisted nine missions with strategic planning and performance monitoring, allowing them to better understand lessons learned in the sector. Over time this assistance has helped at least 16 missions to work with governments to devolve authority, increase NRM-based income generation, and reduce environmental degradation. In a significant advance, partners developed geographical information system (GIS) techniques that allowed Mali to quantify reduced degradation rates. In addition, to respond to the challenge of HIV/AIDS, the program worked with several partners to find ways missions can shape programming and monitoring to protect vulnerable people and ecosystems in affected areas. Finally, work on cross-cutting issues of conflict decentralization and governance resulted in policy guidance and improved local level interventions.

The program managed websites that were key sources of knowledge including maps, research findings and other information relevant to desertification in Africa. The sites were widely used by groups and individuals in Africa, as well as international private voluntary organizations and U.S. government agencies.

SO 698-022: Improved policies, strategies, and programs for preventing, mitigating, and transiting out of crises

FY01: \$6m of which all is relevant to desertification activities

Countries: Burkina Faso, Chad, Eritrea, Ethiopia, Kenya, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Somalia, Sudan (southern provinces), Tanzania, Uganda, Zambia, Zimbabwe

The objective of Famine Early Warning System Network (FEWS NET) is to help establish more effective and sustainable food security information networks in Africa that reduce the vulnerability of groups at risk. FEWS NET is a partnership of four U.S government agencies and one contractor: Foreign Agricultural Service, National Aeronautics and Space Administration (NASA), National Oceanic and Atmospheric Administration (NOAA), the U.S. Geological Survey (USGS), and USAID contractor Chemonics International, Inc.

FEWS NET works directly with African organizations to gather, analyze, and distribute information on agriculture, weather, and other areas important in monitoring for early signs of food insecurity. Every day, specialists from NASA, NOAA, USGS, and African regional centers produce remote sensing imagery and maps on weather and vegetation conditions and post these for public access on web sites. FEWS NET field representatives work with African partners to produce monthly food security reports and periodic assessments of vulnerability. Finally, a USGS desertification and climate change advisor is working with FEWS NET and African partners on original scientific analyses of remote sensing and field data to assess the impacts of desertification and climate change in Africa.

BUREAU FOR ECONOMIC GROWTH, AGRICULTURE AND TRADE (EGAT) -

EGAT/OFFICE OF ECONOMIC GROWTH AND AGRICULTURAL DEVELOPMENT (EGAD)

SO 933-002-01: Improved food availability, economic growth, and conservation of natural resources through agricultural development

Program: Partnerships with U.S. Universities—Collaborative Research Support Programs (CRSP)

Sustainable Agriculture and Natural Resource Management (SANREM) CRSP

COUNTRY: **Mali**

FY01 FUNDING LEVEL: \$285,000

The SANREM CRSP builds capacity for natural resource decision making, democratization, and conflict management; and conducts research on improved land management practices to enhance soil fertility and maintain productivity.

SANREM's West Africa Project seeks to improve natural resource management practices in agro-pastoral systems of the arid and semi-arid regions of West Africa. Project activities are organized around building and supporting institutions for effective natural resource management (NRM) decision-making. The ultimate goal is to slow or halt degradation of the natural resource base and reduce conflict among natural resource users.

This activity provides institution-building support (literacy, numeracy, and institution management training) and NRM planning support (holistic management and conflict management) to NRMAC. Local communities are actively involved in the choice, implementation and monitoring of research on improved technologies that improve soil fertility and pasture productivity. Biophysical and socioeconomic modeling tools are used by the NRMAC to inform decision making, and to explore the interrelationships between environmental sustainability and economic growth. The significant results of all work plans are scaled-up to, and informed by regional stakeholders through participation in regional meetings and workshops on conflict and NRM. These meetings involve regional project partners INSAH (Institut du Sahel) and the NRM Research Pole. Researchers of the Institut d'Economie Rurale (IER) are fully integrated into all work plans.

Broadening Access and Strengthening Input Market Systems (BASIS) CRSP

ACTIVITY TITLE: Rural Markets, Natural Capital and Dynamic Poverty Traps in Kenya (Baringo & Marsabit)

COUNTRY: **Kenya**

FY 2001 FUNDING LEVEL: \$175,000

In arid climates of Kenya, U.S researchers in collaboration with developing country partners investigated the link between poverty and resource degradation. Results are used to develop policies designed to ensure that poorer populations use the resources they rely on for their livelihood in sustainable and productive ways. Researchers combine quantitative and qualitative data collection and analysis with simulations based on bio-economic modeling in order to identify and document effective policies, technologies and programs to combat dynamic poverty traps and reduce soil erosion in rural east Africa.

The bio-economic modeling tested the best policies to halt unsustainable rates of loss of soil nutrients, forests and rangelands in order to bring noticeable improvement in agricultural productivity, food security, poverty reduction, and economic growth. Policy questions surrounding the use of fallows, fertilizer subsidies, tree planting, tax penalties, herd re-stocking, were investigated in order to improve economic growth and develop the agricultural sector, while sustaining natural resources and limiting desertification.

Sorghum/Millet (INTSORMIL) CRSP

ACTIVITY TITLE: Cropping Systems to Optimize Yield, Water and Nutrient Use Efficiency of Pearl Millet

COUNTRIES: **Niger, Mali, Burkina Faso**

FY 2001 FUNDING LEVEL: \$90,000

In Niger, Mali, and Burkina Faso, this project conducts long term studies on the influence of crop residue management on the yield of pearl millet, and the long term effects on soil nutrient levels. A second objective is to increase stove for fuel wood replacement, to increase residue and ground cover and traditional fallow periods for improved water conservation and management to combat desertification. It

is contributing to improved pearl millet production under stressful environmental conditions, while at the same time contributing to improved protection of the environment.

Soil Management CRSP

ACTIVITY TITLE: Soil Management

COUNTRIES: **Mali, Niger, Senegal;**

FY 2001 FUNDING: \$160,000

The Soil Management CRSP has two activities --decision aids for integrated nutrient management, and InterCRSP natural Resource Management.

The project developed a knowledge-tool called NuMaSS (Nutrient Management Support System) to enable institutions, agencies and private sector to provide site-specific nutrient management recommendations to farmers. NuMaSS empowers users to compare and make choices among different field conditions, cropping strategies and nutrient source alternatives. The development of this product has followed a participatory approach, wherein nutrient management researchers in Africa, Asia and Latin America evaluated and recommended improvements. NuMaSS will inform decisions regarding soil acidity, nitrogen and phosphorus management for crops in dry land agricultural areas. Users of the knowledge-tool will be able to diagnose and make recommendations for specific yields specified by the farmer.

The economics module of NuMaSS estimates net returns to applied nutrients. Users can compare different types of elemental fertilizers, available commercial blends and organic sources. Also, users can estimate amounts of inputs for either the highest profit or the best yield. The project carries out research, technology transfer, training and capacity building activities. The interCRSP activity uses a West African regional approach to make the transfer of information for management of the natural resource of dry land agriculture cost effective. This knowledge-tool empowers USAID partners to manage nutrients in agriculture for enhanced productivity and protection the environment.

Global Livestock (GL) CRSP

The GL has 4 projects in East Africa and 1 in Central Asia.

ACTIVITY TITLE: Pastoral Livestock Marketing in Northern Kenya and Southern Ethiopia: Identification of Priority Interventions to Promote More Timely Livestock Sales in Relation to Stress Periods.

COUNTRIES: **Ethiopia, Kenya**

FY 2001 FUNDING LEVEL: \$50,000

This subproject in the GL-CRSP involves two projects operating in East Africa. The objective is to establish an analytical framework to allow assessment of livestock market interventions that would lead to timely off-take of animals to alleviate the damaging effects of limited market function on grazing lands in the Greater Horn of Africa. Key components of the research are:
Collecting and Analyzing primary data on pastoralist and trader behavior, and livestock market performance, coupled with analysis of secondary data on livestock marketing patterns,

spatial characterization of the livestock market chain in Ethiopia and Kenya as related to domestic and international markets, and Evaluating the likely effects of alternative interventions intended to stimulate increasingly responsive pastoral marketing.

The project conducts strategic research for the development of a knowledge-tool that will enable users to provide information to livestock farmers in dryland areas to better cope with recurrent drought and famine and better manage arid lands. This project promotes sustainable agricultural development.

ACTIVITY TITLE: Early Warning System for Monitoring Livestock Nutrition and Health for Food Security of Humans in East Africa. This project is implemented by Texas A&M University
COUNTRIES: **Ethiopia, Kenya, Uganda, Tanzania, Eritrea**
FY 2001 FUNDING LEVEL: \$350,000

Over-grazing can lead to land degradation, especially in Arid climates. This activity is developing an early warning system for the arid regions of East Africa. It will provide information that can help adjust livestock number during drought to reduce negative impacts on the land.

ACTIVITY TITLE: Improving Pastoral Risk Management on East African Rangelands (PARMINA)
COUNTRIES: **Ethiopia, Kenya**
FY 2001 FUNDING LEVEL: \$50,000

The Project is involved in trans-boundary activities related to trade and conflict mitigation. The project conducts grass-roots workshops and pastoral women's tours where Boran women from Ethiopia and Kenya were came together to exchange ideas on small-scale livelihood diversification.

ACTIVITY TITLE: Integrated Assessment of Pastoral – Wildlife Interactions in East Africa
COUNTRIES: **Kenya, Tanzania**
FY 2001 FUNDING LEVEL: \$350,000

The project is working to develop a system for understanding the impact of land use policies on the livestock, households of those dependent on livestock, and valuable wildlife particularly in semi-arid and arid regions of East Africa.

Bean/Cowpea CRSP

FY01 Funding: \$0.29m

ACTIVITY TITLE: Research Activities and Budget Allocation on Sustainable Dryland Agriculture and Natural Resource Management

The Bean/Cowpea CRSP is involved in a variety of research activities in Africa and the Americas that have implications for agriculture in dryland ecosystems.

African Activity Highlights:

In **Cameroon, Ghana, and Senegal**, USAID is developing cowpea germplasm with adaptation to the semiarid conditions of the Sahel in West Africa. USAID is also working in the same three countries to develop biological controls for control of flower and pod sucking insects in cowpea, as alternatives to chemical insecticides. Finally, USAID is working in this same region to develop Integrated Pest Management (IPM) strategies to enhance the sustainability of cowpea production systems in the Savanna

and Sahel regions of West Africa. In **Senegal**, the Mission supporting efforts to genetically enhance heat tolerance in cowpea for tropical West Africa. USAID is supporting regional drought nurseries that screen bean germplasm and analyze traits associated with increased drought tolerance in **Tanzania**.

Partnerships with International Agricultural Research Centers

International Fertilizer Development Center (IFDC)

ACTIVITY TITLE: Farmers for the Future, IFDC

COUNTRY: **Burkina Faso**

FY 2001 FUNDING LEVEL: \$110,000 from USAID/AFR/SD (counted within AFR/SD funding)

This activity promotes integrated soil fertility management (ISFM) strategies for improving the agronomic efficiency of external inputs with a special emphasis on chemical fertilizers. ISFM technology is a feasible pathway for sustainable agricultural intensification, and a way out of the vicious circle between poverty and land degradation. This activity promotes sustainable agriculture development for food security and income generation.

ACTIVITY TITLE: Sustainable Dry Land Agriculture

COUNTRY: **Mali**, and selected West Africa sites

FY 2001 FUNDING LEVEL: \$250,000 from USAID/EGAT/AFS

Improved socio-economic and policy environments, enable farmers to invest in their land and pushing the private sector in market development. Developing agroforestry systems to increase carbon content of soils. Soil carbon retains nutrients and water to make use of inorganic fertilizers economically feasible. This activity promotes sustainable agriculture development for food security and income generation.

USAID/EGAT/AFS

Title of Activity: Geographic Information for Sustainable Development-World Summit on Sustainable Development (GISD-WSSD)

FY01 \$1.2m

SO: Improved food availability, economic growth, and conservation of natural resources through agricultural development

Countries Involved: Mali, Niger, Benin, Senegal, Burkina Faso, Ivory Coast, Ghana, Uganda, Kenya, Tanzania, Eritrea, Ethiopia, Mozambique, Botswana, Namibia, and South Africa

The Geographic Information for Sustainable Development (GISD) plan of action outlines a US-led international effort to apply a new generation of earth observation data, state of the art GIS-linked technologies, and field-tested geographic knowledge to ongoing sustainable development projects in diverse areas within Africa. The aim is to assist local, national, and international agencies working in Africa to better address long-term challenges such as disaster mitigation, natural resource management, and poverty alleviation. The results will demonstrate the value of international collaboration in using geographic information for a broad range of sustainable development challenges over the next decade.

EGAT/OFFICE OF ENVIRONMENT AND NATURAL RESOURCES (ENR)

SO 934-001-01: Increased and improved protection and sustainable use of natural resources, principally forests, biodiversity, freshwater and coastal ecosystems, and agricultural lands

The Global Conservation Program's (GCP) goal is to conserve globally significant areas of biodiversity. In dryland areas, GCP partners work with communities to better manage their natural resources for economic benefits and long term viability of the ecosystem.

In FY01 the EGAT/ENV Biodiversity Team funded the African Wildlife Foundation in 4 Heartland sites in **Kenya, Tanzania** and two cross-border sites in **Zambia/Zimbabwe/Mozambique** and in **Kenya/Tanzania**. Heartlands are large landscapes of exceptional natural value extending across state, private and community lands. AWF works with landholders, governments and other stakeholders to conserve wild species, ecological communities and natural processes. These lands are generally drier than viable arable land and are marginal to good grazing lands. The program works with stakeholders to improve management of protected areas, improve economic options in multiple use areas (including ecotourism and non-tillage, grazing agricultural options) and strengthening the capacity of communities to manage their own resources. FY01 Funding \$ 790,000

ASIA (from USAID Asia and Near East, and Europe and Eurasia Bureaus)

INDIA

SO 386-004: Increased Environmental Protection in Energy, Industry, and Cities

FY01: \$0.12m

Working with the Alliance to Save energy, USAID/India is improving energy efficiency through improved water efficiency. Improved urban use of scarce water supplies is critical in lessening water demands on scarce resources. The Alliance is working with the municipal corporations of Indore and Pune, two Indian municipalities faced with the on-going challenges of providing basic municipal services to growing populations, and limited budgetary resources to do so. Efforts have focused upon improving both the management and technologies used within each municipality's water treatment and distribution, and street lighting systems. This work has led to concrete results in terms of water conserved, through leak and loss reduction, while expanding the distribution network. There have also been measurable savings in terms of energy and rupees, through improvements to the water system, through pumping system efficiency upgrades, and in the cities' lightening infrastructure, through the implementation of lighting timers.

Lebanon

SO 268-005: Improved Environmental Practices

FY01: \$0.5m

Activities under this strategic objective focus on improving the health, safety, and economic well-being of rural residents through appropriate environmental technology.

Initiatives in the water sector, aimed at better management of water resources, will provide technical assistance and training to strengthen field-level water management, local participation, and collaborative planning among water users; broaden private-sector participation in Lebanon's water authorities; develop water pricing policies; and boost cost recovery.

WEST BANK/GAZA

SO 294-002: Greater Access to and More Effective Use of Scarce Water Resources

FY01: \$55.6m (Includes USAID FY01 and Wye Funds, all managed by USAID)

West Bank/Gaza faces some very basic constraints to development that have been exacerbated by the current uprising include nascent institutions of governance; limited modern infrastructure; limited natural resources, especially water; geographic separation of the West Bank and Gaza; a rapidly expanding population; and a volatile political and security environment.

A grossly inadequate supply of water for household consumption, agricultural production and industrial development, and an inadequate system for effectively eliminating water sewage, are major obstacles to long-term sustainable development in the West Bank and Gaza. Since 1996, USAID-funded activities have directly supported increasing the level of potable water in the West Bank and eliminating the presence of raw sewage from the streets of Gaza. Activities planned over the next several years under this objective are aimed at developing and implementing a long-term sustainable solution to the acute shortage of water through the construction of water wells and the development of a village water network, and

addressing the sewage problem through the construction or expansion of several wastewater treatment plants.

The following activities in water management and improved agriculture directly support combating desertification and drought as well as lessening conflict over scarce water sources:

\$45,000,000 (Wye and USAID funds) - Building of the Hebron Wastewater Treatment Plant. The treated wastewater will go to agricultural reuse.

\$5,000,000 - The Community Services Program (SO8) has awarded grants for a wide variety of community development activities, including cisterns and similar small-scale water supply measures, and some agricultural land development. Of a much larger grant program, approximately \$5,000,000 is used to fund water-agriculture activities.

\$1,100,000 - San Diego State University will begin implementing a training program in agricultural reuse of treated water in May, 2002 (Grant will use \$450,000 from Wye and \$332,000 from '01 USAID Funds).

\$4,500,000 - Coastal Aquifer Management Program (CAMP): To promote integrated water management practices, USAID began implementing a Coastal Aquifer Management Program in Gaza in FY 1998 to preserve the aquifer as a sustainable source of safe drinking water. In FY 2001 and FY 2002, the program will support development of innovative systems related to well system management, aquifer protection, recharge of aquifers, and reuse of treated wastewater

CENTRAL ASIAN REPUBLICS (from USAID Europe and Eurasia region - Kazakhstan, Turkmenistan, Uzbekistan)

SO 1.6: Improved Management of Critical Natural Resources, including Energy

FY01: \$2.9m in water activities that address desertification

Central Asia is dependent on its principal natural resources, oil, gas, and water, for its economic growth. In the past, abuse of these resources has led to disasters such as shrinking of the Aral Sea and pollution of the Caspian Sea. The purpose of this objective is to change the way that water and energy resources in Central Asia are managed, largely through training and technical assistance that will improve the management capacity of natural resources officials; improve policy and regulatory frameworks; and build public commitment.

The CAR regional Mission can attribute almost all FY01 water activities to fighting desertification. Following are 3 submissions. The first is on a CAR regional basis. The other 2 are activities are funded with MASHAV.

1. Integrated Water Management
CAR Region
FY01: \$2.5m

These activities include providing technical assistance, training, and selected equipment to water managers and/or policymakers in each CAR nation to improve the management of the water resources in these semi-arid and arid nations. Assistance is provided on the national level to National Hydroment Services, Ministries of Agriculture and Water Resources and River Basin Management Agencies in order

to better collect, process, and exchange water data. Such data is used for improved planning, allocating and controlling water resources throughout the region.

2. Environmental Demonstrations of Wetland Management
Kazakhstan
FY01: \$300K

In cooperation with MASHAV, the Israeli international development agency, USAID/CAR is implementing a series of pilot projects demonstrating management techniques that are environmentally sustainable and to enhance livelihoods. Initial activities include fisheries development and agroforestry in the Aral Sea delta regions.

3. Environmental Demonstrations of Biological Drainage and Commercial Forestry
Uzbekistan
FY01: \$120K

In cooperation with MASHAV, the Israeli international development agency, USAID/CAR is implementing a series of pilot projects demonstrating management techniques that are environmentally sustainable and to enhance livelihoods. Activities include agroforestry to reduce groundwater levels on waterlogged and saline soils no longer suitable for agriculture.

BUREAU FOR ECONOMIC GROWTH, AGRICULTURE AND TRADE (EGAT) -

EGAT/ OFFICE OF ECONOMIC GROWTH AND AGRICULTURAL DEVELOPMENT (EGAD)

SO 933-002-01: Improved food availability, economic growth, and conservation of natural resources through agricultural development

Program: Partnerships with U.S. Universities—Collaborative Research Support Programs (CRSP)

Global Livestock (GL) CRSP

The GL has 4 projects in East Africa and 1 in Central Asia.

ACTIVITY TITLE: Livestock Development and Rangeland Conservation Tools for Central Asia

COUNTRIES: **Turkmenistan, Kazakhstan, Uzbekistan**

FY 2001 FUNDING LEVEL: \$450,000

The project is developing a system to measure carbon flux that will allow prediction of carbon sequestering in rehabilitation of degraded semi-arid and arid lands.

EGAT/OFFICE OF ENVIRONMENT AND NATURAL RESOURCES (ENR)

SO 934-001-01: Increased and improved protection and sustainable use of natural resources, principally forests, biodiversity, freshwater and coastal ecosystems, and agricultural lands

The Global Conservation Program's (GCP) goal is to conserve globally significant areas of biodiversity. In dryland areas, GCP partners work with communities to better manage their natural resources for economic benefits and long term viability of the ecosystem.

In **Nepal**, the GCP works with EnterpriseWorks Worldwide to conserve the globally significant mountain biodiversity of western Nepal through community forest management linked to enterprise development. Support is provided to communities to initiate and advance community forestry and sustainable enterprises of non-timber forest products, including essential oils, handmade paper, and herbal medicines. FY01 funding \$276,500

LATIN AMERICA AND THE CARIBBEAN (LAC)

BOLIVIA

SO 511-004: Reduced degradation of forest and water resources and biodiversity conserved

FY01: \$1.48m

The majority of USAID/Bolivia's environment activities are concentrated in areas of humid and tropical forests rather than drylands. However several activities under SO4, Reduced degradation of forest and water resources and biodiversity conserved, focuses on dryland areas. Activities include: 1) Wildlife Conservation Society (WCS) activities with the Kaa-Iya Gran Chaco Protected Area, 2) The Nature Conservancy's (TNC) work with the Sama and Eduardo Avaroa National Parks, and 3) A portion of the larger BOLFOR activities in the Chiquitania.

Several activities demonstrate strong opportunities for U.S. companies, as forest areas are available for 40-year concessions. In addition, the GOB is eager to attract foreign investment—coupled with local firms or independently. Bolivian law requires sustainable management of forests. Technical support is available (funded by USAID) to assist firms in obtaining international voluntary certification under the Forest Stewardship Council. These efforts can also lead to supplying certified timber to U.S. furniture manufacturers. In addition, in Tarija, under the Parks in Peril initiative, the local, privately-owned water company and five municipalities have committed to work with The Nature Conservancy and its local partner to conserve Tarija's principal water source, Sama National Park. If successful, this public-private partnership could serve as a model for watershed conservation in Bolivia, where conflicts over water rights have been severe. In 2001 these institutions will develop a joint strategy for the maintenance of Tarija's water sources.

Activity Highlights:

1. Project Kaa-Iya/Gran Chaco Protected Area, Phase IV

FY 2001 funding level: \$750,000

Through WCS activities, the 3.4 million hectares of land in Kaa Iya del Gran Chaco National Park experienced advances as a result of management plan approval, strengthened financial management, and the completion of three years of applied community-based wildlife research.

2. BOLFOR—the Sustainable Forest Management Project of Bolivia.

FY 2001 funding level: \$600,000

The program is in the Chiquitanía, a large region covering the eastern part of Santa Cruz. Rainfall runs between 1,100 millimeters down to less than 800. Soils are poor and often sandy, making the region even more subject to drought. This area is one of five major forest regions and accounts for approximately 20% of the BOLFOR program.

3. Parks in Peril: Eduardo Avaroa National Park 4/99-9/01

Implementing Mission: USAID/W, LAC/RSD

FY 2001 funding level: \$130,000

Ecuador

SO 518-001: Biodiversity conserved in selected protected areas and their buffer zones

FY01: \$100,000

The vast majority of USAID/Ecuador's work focuses on rainforest and marine resources, rather than dryland areas. However, a segment of the work in the Galapagos is related to combating desertification. The project on "Restoring Wetlands on Isabela Island" relates to the sustainable management of critical wetlands in a semi-arid system. \$100,000 of the project's FY01 \$500,000 funded an environmental impact assessment and related tourism assessment and the balance for further development of nature trails and community-based ecotourism activities. The program is being implemented by the Galapagos National Park. This type of activity strengthens park management, thereby reducing the potential for desertification by unsustainable tourism activities in the future.

HAITI

SO 521-002: 1. Environmental Degradation Slowed

FY01: \$2.5m

SO 521-001: 2. Sustainable Increase Income for the Poor

FY01: \$7.5m

USAID/Haiti seeks to slow the rapid pace of environmental degradation by improving natural resource management through SO2, Environmental Degradation Slowed, and through SO1, Sustainable Increased Income for the Poor. Activities under SO include: 1) Increased adoption of sustainable natural resource management practices, 2) Replication of successful models of watershed/catchment rehabilitation, and 3) Civil society organizations implementing environmental solutions. Principal customers include small agricultural producers, urban charcoal users, and residents in several strategic watersheds.

The number of farmers benefiting from the USAID/Haiti's efforts to combat desertification increased from 204,000 to 246,000, exceeding the target by 20%. The introduction of new marketing channels, distribution of improved germplasm, construction of water-harvesting structures, and launching of other income-generating activities attracted more farmers than expected. The number of trees planted or grafted also surpassed the target by 30%, for a total of 4 million. As a result, soil erosion, loss of soil fertility, and other damage that traditionally accompanies tropical downpours have been visibly and dramatically reduced in all areas of USAID interventions.

Activity Highlights:

1. Community-Based Natural Resources Management/Agricultural production

SO: Environmental Degradation Slowed

FY01 Level of Funding: \$2.5 m

2. Natural Resources Management/Dry land agriculture in the Northwest of Haiti

SO: Sustainable Increased Income for the Poor

Project dates: This activity initially implemented under the Productive Land Use System (PLUS) from 1994-2001, will fall under the new Development Assistance Program (DAP) for 2002-2006 and will be expanded to other dryer areas of Haiti

FY01 funding level: \$0.6m

3. Natural Resources Management/Agricultural production

SO: Sustainable Increase Income for the Poor

Project Dates: These activities were implemented under the PLUS project (1994-2001) and are now incorporated under the new Hillside Agriculture Program (HAP) (2000-2004).

FY01 funding level: \$1.9m

4. Natural Resources Management/Agricultural production

SO: Sustainable Increased Income for the Poor

Project dates: 3-year, 1997-1999, Bilateral PL-480 Title III commodity monetization program

FY01 funding level: \$5.0m

Paraguay

SO 526-005: Sustainable management of globally important eco-regions improved

FY01: \$223,550

USAID/Paraguay has been working on local desertification related issues. Related activities include: *Strengthening the Sustainable Management of the Chaco and Pantanal Ecoregions*, and *Cross-Border Conservation Initiatives in the Chaco and Pantanal of Paraguay* (through the USAID Global Conservation Program (GCP)).

USAID/Paraguay has supported a local NGO, Fundación para el Desarrollo Sustentable del Chaco Sudamericano (DeSdelChaco), to prepare, in cooperation with local governments and the Environmental Secretariat, the National Action Plan for the implementation of the Convention to Combat Desertification. This has included Departmental forums to disseminate the guidelines and relevant content of the CCD, and its relationship with other international conventions.

In addition, USAID/Paraguay, through the Global Conservation Program (GCP), funds The Nature Conservancy's program, *Cross-Border Conservation Initiatives in the Chaco and Pantanal of Paraguay*. This project works to strengthen the capacity of Paraguayan public and private organizations to conserve biodiversity with the globally important ecoregions of the Chaco and Pantanal. Part of the program focuses on establishing models and judicial tools for private lands conservation and strengthening GOPy National System for Protected Areas (SINASIP) proposed public protected areas systems. The Program also addresses cross-boarder collaboration and the identification of potential biological corridors. Cross-border collaborations involves organizing technical exchanges and training between decision makers, scientists, park guards and other stakeholders in order to strengthen links between existing national parks in Paraguay, Bolivia and Brazil.

Activity Highlights:

1. *Strengthening the Sustainable Management of the Chaco and Pantanal Ecoregions*. The overall program has included capacity building and raising awareness on many aspects of sustainable development issues including: 1) Existing land use and production systems; 2) Over-pasturing; 3) Deforestation for the creation of pastureland; 4) Maintenance of pastureland, 5) Management of wildfires; 5) Pesticides and their impact; 6) Land use planning and zoning; and, 7) Water resources in the Chaco. Program stakeholders include PRODECHACO, the Ministry of Agriculture and Livestock, the Secretariat of the Woman, Pro-Indigenous Communities, the municipality of Mariscal Estigarribia, the Department of Boqueron, and the Red Cross.

2. *Cross-Border Conservation Initiatives in the Chaco and Pantanal of Paraguay*. Activities here include, interpreting and analyzing the results of the pilot project, "a Pilot Project to determine priorities for sustainable development in the watershed of the Riacho Yacaré Sur, central Chaco." Generate recommendations and a plan of action.

BUREAU FOR ECONOMIC GROWTH, AGRICULTURE AND TRADE (EGAT) -

EGAT/OFFICE OF ECONOMIC GROWTH AND AGRICULTURAL DEVELOPMENT (EGAD)

SO 933-002-01: Improved food availability, economic growth, and conservation of natural resources through agricultural development

Program: Partnerships with U.S. Universities—Collaborative Research Support Programs (CRSP)

Bean/Cowpea CRSP

FY01 Funding: \$0.29m

ACTIVITY TITLE: Research Activities and Budget Allocation on Sustainable Dryland Agriculture and Natural Resource Management

The Bean/Cowpea CRSP is involved in a variety of research activities in Africa and the Americas that have implications for agriculture in dryland ecosystems.

Latin America Activity Highlights:

In **Mexico and Honduras**, the Missions are helping to develop Middle American/Andean bean varieties for lowland tropics with enhanced biological nitrogen activity and tolerance to terminal drought, heat and low soil fertility. In Mexico, USAID is supporting the development of bean germplasm with enhanced drought adaptation for the lowlands and highlands of Mexico. In **Mexico and Ecuador**, USAID supports Develop and release of bean varieties and breeding lines with superior nitrogen fixing ability for semiarid highland production areas. The two Mission also work to help improve the quality and availability of rhizobia for inoculation of beans in semiarid highland areas and improve the inoculation method. The Mission in **Ecuador** also support the identification of soil conservation, management, and fertilization strategies leading to reduced erosion/ degradation of soil, and improved water conservation in semiarid highland areas.

EGAT/ OFFICE OF ENVIRONMENT AND NATURAL RESOURCES (ENR)

SO 934-001-01: Increased and improved protection and sustainable use of natural resources, principally forests, biodiversity, freshwater and coastal ecosystems, and agricultural lands

The Global Conservation Program's (GCP) goal is to conserve globally significant areas of biodiversity. In dryland areas, GCP partners work with communities to better manage their natural resources for economic benefits and long term viability of the ecosystem.

In **Brazil**, the GCP works with Conservation International's Corridor program in the Cerrado/Pantanal region. The Cerrado is considered one of the richest of all tropical savanna regions, displaying very high levels of endemism. CI is strengthening the protected area network and is engaging landowners in discourse and negotiations to influence farmers to set aside portions of their holdings for conservation. CI is working with farmers and landholders to plant native vegetation and restore soil in degraded areas, promoting agricultural best practices, and creating incentives for more landowners to join the Corridor's sustainable economic activities such as organic beef and honey production. FY01 Funding \$606,000

Through the National Fish and Wildlife Foundation, the Biodiversity Team conserves key dryland habitats for migratory birds. This is implemented through a small grants program supporting capacity building, Protected area management, and monitoring efforts in **Mexico, Colombia and Paraguay**. FY01 \$100,000.

CENTRAL AND EASTERN EUROPE (from USAID EUROPE and EURASIA Bureau)

ROMANIA

SO186-016: Increased Environmental Management Capacity to Promote Sustainable Economic Growth

FY01: \$0.85m

USAID's objective is to enable Romania to protect its natural resources with a specific focus on reduction of greenhouse gases and preservation of bio-resources. USAID assistance builds both public and private management capacities to address critical constraints to sustainable development and facilitates urgently needed environmental investments.

The Mission portfolio supports activities focusing on water users associations development to support the Romanian irrigation rehabilitation. The project provides technical, management and program assistance to support water user associations (WUAs) and facilitate the development of a market driven rehabilitation of the irrigation system in Romania. WUA development activity will include marshalling business support services to help WUAs improve their practices and operations. Over a period of several years, as subsidies to irrigation gradually disappear, WUAs will have to sustain themselves from their members' irrigated production and product marketing. Activities include technical assistance to support efficient use of irrigation water. The program includes feasibility studies for assessing water users associations' development status and training needs. A feasibility study for weather risk assessment and crop insurance system implementation is funded.

USAID is assisting in developing and improving the environmental policy and legislation in Romania as well as supporting the improvement of the water and soil monitoring process. This activity will lead to the improvement in the quality of the ground and surface waters, a better maintenance of productive ecosystems and critical natural habitats in the water sources (including the Danube) along the Black Sea Coast.

GLOBAL (not attributed to region)

PROJECT TITLE: Consultative Group on International Agricultural Research (CGIAR)

FY01 - Summary of the portion of USAID Financial Resources Contributed CGIAR Centers that can be attributed to work on combating desertification.

ICARDA	\$1.05m
ICRISAT	\$1.7m
ILRI	\$3.05m
ICRAF	\$0.7m
IWMI	\$0.1m
IITA	\$2.1m
TOTAL	\$8.7m

The Consultative Group on International Agricultural Research (CGIAR) is an association of public and private members supporting a system of 16 International Agricultural Research Centers that work in more than 100 countries. The CGIAR mobilizes cutting-edge science to reduce hunger and poverty, improve human nutrition and health, and protect the environment. Their mission is to contribute to food security and poverty eradication in developing countries through research, partnerships, capacity building, and policy support thereby promoting sustainable agricultural development based on the sound environmental management of natural resources.

The CGIAR is well-positioned internationally and has the experience and expertise to address the on-going problems associated with desertification (defined as land degradation in arid, semi-arid, and dry sub-humid areas). Desertification is a major worldwide problem, but it is most extensive and severe in the arid and semi-arid areas of sub-Saharan Africa, where one third of the dryland soil degradation of the entire world is taking place. These areas are home to 120 million people and have some of the world's highest population growth rates. Most of the population depends on rain-fed agriculture and livestock production, which are particularly vulnerable to climate shocks and climate change. Increasing scarcity of arable land and consequent extension of agriculture into very marginal lands are resulting in land degradation, the declining productivity of crops and livestock, and a loss in biodiversity. Past attempts to arrest desertification have had limited success. The problems associated with the desert margins are multi-dimensional and complicated due to complex agricultural systems and the fragile environment.

TABLE IV – USAID FY2001 DESERTIFICATION ACTIVITY FUNDING SUMMARY

USAID Mission or Washington Bureau	AFRICA Country(ies)	SO/Activity	FY01 Funding Level	Attribution by Activity Type
AFR/SD (Africa Bureau – Washington)	Sub-Saharan Africa	Improved environment and natural resource management systems	\$4,000,000	Natural Resource Management
AFR/SD	Burkina Faso, Chad, Eritrea, Ethiopia, Kenya, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Somalia, Sudan (southern provinces), Tanzania, Uganda, Zambia, Zimbabwe	Improved policies, strategies, and programs for preventing, mitigating, and transiting out of crises (698-022 - Famine Early Warning System Network (FEWS NET))	\$6,000,000	Early Warning Systems
Egypt	Egypt	Access to Sustainable Utility Service in Selected Areas Increased	\$1,400,000	Wastewater treatment for Agricultural re-use
Ethiopia	Ethiopia	SO7: Rural Household Production and Productivity Increased SpO 12: Improved Livelihoods for Pastoralists and Agropastoralists in Southern Ethiopia - Management of participatory opportunities for women in extension and research (EMPOWER)	\$1,170,000	Improved agriculture practices
Guinea	Guinea	Increased use of sustainable natural resource management practices	\$3,000,000	Natural Resource Management
Kenya	Kenya	Improved natural resource management in targeted biodiverse areas by and for stakeholders	\$3,000,000	Biodiversity / Natural Resource Management
Madagascar	Madagascar	Biologically diverse eco-systems conserved in priority conservation areas	\$3,000,000	Biodiversity
Malawi	Malawi	Increased sustainable use, conservation, and management of renewable natural resources	\$3,200,000	Natural Resource Management

USAID Mission or Washington Bureau	Country(ies)	SO/Activity	FY01 Funding Level	Attribution by Activity Type
Mali	Mali	Increased value-added of specific economic sectors to national incomes	\$3,000,000	Improved agriculture practices
Bureau for Economic Growth Agriculture and Trade (EGAT)- Washington	Mali	Sustainable dry land agriculture	\$250,000	Improved agriculture practices
Morocco	Morocco	Improved water resources management in Souss-Massa River Basin	\$1,500,000	Integrated Water Resource Management
Namibia	Namibia	Increased benefits received by historically disadvantaged Namibians from sustainable local management of natural resources	\$3,800,000	Natural Resource Management
Senegal	Senegal	More effective, democratic, and accountable local management of services and resources in target areas	\$2,500,000	Agriculture/ Natural Resource Management
Tanzania	Tanzania	Improved conservation of wildlife and coastal resources in target areas	\$2,535,000	Biodiversity / Natural Resource Management
Uganda	Uganda	Critical ecosystems conserved to sustain biological diversity and to enhance benefits to society	\$3,500,000	Biodiversity / Natural Resource Management
Zambia	Zambia	Increased rural incomes of selected groups	\$900,000	Agriculture/ Natural Resource Management
Regional Economic Development Services Office (REDSO)	REDSO -East and Southern Africa		\$800,000	Natural Resource Management
Regional Center for Southern Africa	RCSA - Southern Africa	Increased regional cooperation in the management of shared natural resources	\$2,500,000	Natural Resource Management

USAID Mission or Washington Bureau	Country(ies)	SO/Activity	FY01 Funding Level	Attribution by Activity Type
West Africa Regional Program	WARP - West Africa	Food security and Natural Resources and Environment Management Program	\$7,000,000	Agriculture/ Natural Resource Management
Bureau for Economic Growth Agriculture and Trade (EGAT)- Washington	Cameroon, Ghana, Senegal, Tanzania	Bean/Cowpea CRSP	\$116,405	Improved agriculture development
EGAT Washington	Ethiopia, Kenya	Improved food availability, economic growth, and conservation of natural resources through agricultural development -Global Livestock CRSP -	\$100,000	Improved agriculture development
EGAT Washington	Ethiopia, Kenya, Uganda, Tanzania, Eritrea	Global Livestock CRSP - Early Warning System for Monitoring Livestock Nutrition and Health for Food Security of Humans in East Africa	\$350,000	Improved agriculture development
EGAT Washington	Kenya	Broadening Access and strengthening input market systems (BASIS) CRSP	\$175,000	Improved agriculture development
EGAT Washington	Kenya, Tanzania	Global Livestock CRSP - Integrated Assessment of Pastoral – wildlife Interactions in East Africa	\$350,000	Improved agriculture development
EGAT Washington	Mali	Sustainable Agriculture and Natural resource Management (SANREM) CRSP	\$285,000	Improved agriculture development
EGAT Washington	Mali, Niger, Senegal	Soil Management CRSP	\$160,000	Improved agriculture development
EGAT Washington	Niger, Mali, Burkina Faso	INTSORMIL CRSP - Cropping systems to optimize yield, water and nutrient use efficiency of pearl millet	\$90,000	Improved agriculture development

USAID Mission or Washington Bureau	Country(ies)	SO/Activity	FY01 Funding Level	Attribution by Activity Type
EGAT Washington	Mali, Niger, Benin, Senegal, Burkina Faso, Ivory Coast, Ghana, Uganda, Kenya, Tanzania, Eritrea, Ethiopia, Mozambique, Botswana, Namibia, and South Africa	Geographic Information for Sustainable Development-World Summit on Sustainable Development (GISD-WSSD)	\$1,200,000	Early warning systems & satellite monitoring
EGAT Washington	Kenya	Global Conservation Program (GCP) - Conservation of Resources in African Landscapes	\$168,000	Biodiversity
EGAT Washington	Kenya-Tanzania	GCP - Conservation of Resources in African Landscapes	\$206,000	Biodiversity
EGAT Washington	Tanzania	GCP - Conservation of Resources in African Landscapes	\$227,000	Biodiversity
EGAT Washington	Zambia, Zimbabwe, Mozambique	GCP - Conservation of Resources in African Landscapes	\$189,000	Biodiversity
	Asia			
India	India	Increased Environmental Protection in Energy, Industry, and Cities	\$120,000	Water + Energy Efficiency
Central Asian Republic Program	Kazakhstan	Environmental Management of wetlands	\$300,000	Integrated Water Resource Management
Lebanon	Lebanon	Improved Environmental Practices	\$500,000	Integrated Water Resource Management
EGAT Washington	Nepal	GCP - Enterprise-Based Biodiversity Conservation	\$276,500	Biodiversity
Central Asian Republic Program	Uzbekistan	Environmental demonstrations of biological drainage and commercial forestry	\$120,000	Forestry

USAID Mission or Washington Bureau	Country(ies)	SO/Activity	FY01 Funding Level	Attribution by Activity Type
Central Asian Republic Program	Central Asia	Integrated Water Management	\$2,500,000	Integrated Water Resource Management
EGAT Washington	Turkmenistan, Kazakhstan, Uzbekistan	Global Livestock CRSP - Livestock Development and Rangeland Conservation Tools for Central Asia	\$450,000	Improved agriculture development
West Bank/Gaza	West Bank/ Gaza	SO 294-002 - Greater Access to and More Effective Use of Scarce Water Resources	\$10,600,000	Integrated Water Resource Management
West Bank/Gaza	West Bank/ Gaza	SO 294-002 - Building Hebron wastewater treatment plant	\$45,000,000	Wastewater treatment for agricultural re-use
	Latin America and Caribbean			
Bolivia	Bolivia	Reduced degradation of forest and water resources and biodiversity conserved -Kaa-lya Gran Chaco Protected area, Phase IV-	\$750,000	Biodiversity
Bolivia	Bolivia	BOLFOR - the Sustainable Forest Management Project of Bolivia	\$600,000	Forestry
Bolivia & Washington	Bolivia	Reduced degradation of forest and water resources and biodiversity conserved - Eduardo Avaroa National Park	\$130,000	Biodiversity
Ecuador	Ecuador	Biodiversity conserved in selected protected areas and their buffer zones	\$100,000	Biodiversity
Haiti	Haiti	SO 521-001- Sustainable Increase in Income for the Poor	\$7,500,000	Improved agriculture development
Haiti	Haiti	SO 521-002 - Environmental Degradation Slowed	\$2,500,000	Agriculture/ Natural Resource Management
Paraguay	Paraguay	Sustainable management of globally important ecoregions improved	\$23,550	Biodiversity / NRM

USAID Mission or Washington Bureau	Latin America and Caribbean Country(ies)	SO/Activity	FY01 Funding Level	Attribution by Activity Type
Paraguay	Paraguay	GCP - Cross border Conservation initiative in the Chaco and Pantanal	\$200,000	Biodiversity
EGAT Washington	Mexico, Ecuador, Honduras	Bean/Cowpea CRSP -	\$172,520	Improved agriculture development
EGAT Washington	Brazil	GCP - Biodiversity corridor planning and implementation program	\$606,000	Biodiversity
EGAT Washington	Mexico, Colombia, Paraguay	Neotropical Migratory Bird Conservation Small Grants Program	\$100,000	Biodiversity
	Central & Eastern Europe			
Romania	Romania	Under SO 1.3 - Water users associations	\$850,000	Integrated Water Resource Management
Washington	Global	CGIAR -	\$8,700,000	Improved agricultural practices