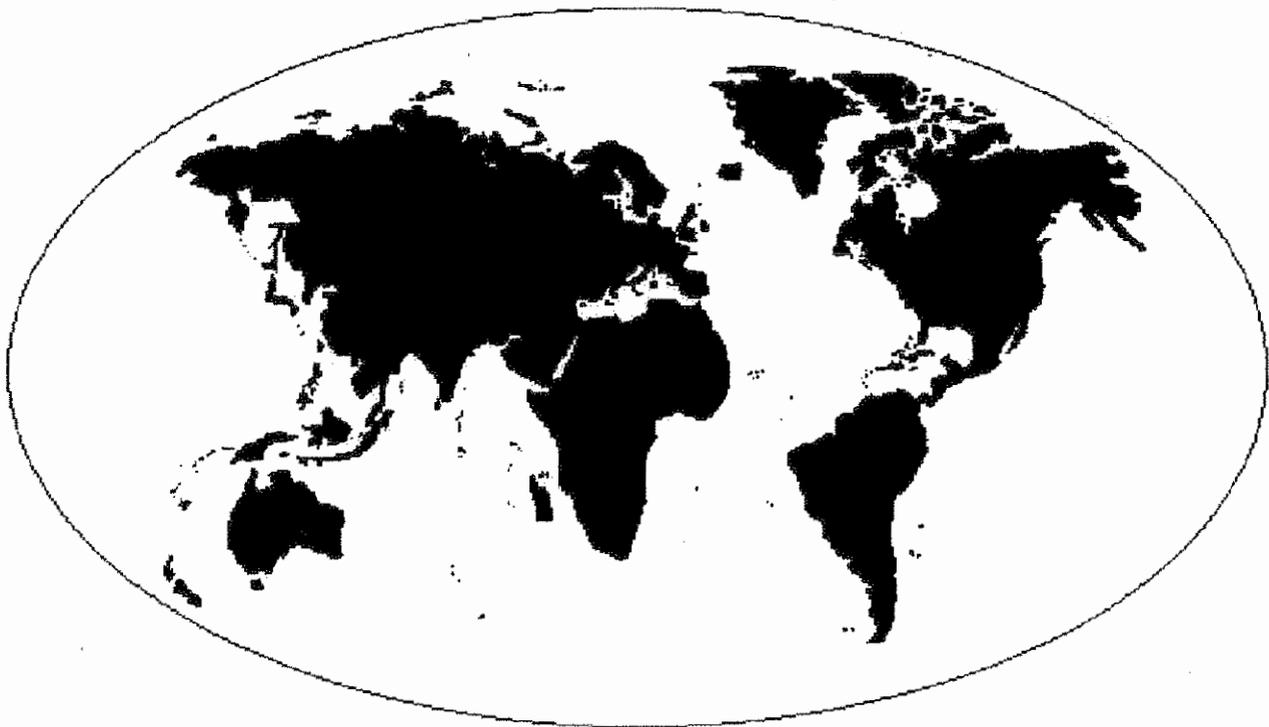


U. S. Department of the Interior
International Technical Assistance Program



Quarterly Report
June 15, 2004 through September 30, 2004

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International Technical Assistance Program
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International Technical Assistance

The U.S. Department of the Interior (DOI) is the nation's principal conservation agency, responsible for the management and protection of its most precious natural, cultural, and historical resources. Established more than 150 years ago, DOI currently has more than 60,000 employees and manages more than 436 million acres of US lands.

With donor funds, DOI can provide training and technical assistance to countries in areas of DOI staff expertise, such as:

Protected area management
Cultural resources management
Environmental education
Endangered species conservation
Visitor services
Recreation management
Fire management
Control of invasive species

Minerals management
Reclamation of abandoned mine lands
Ecotourism
Wildlife law enforcement
Resource interpretation
Park infrastructure
Concessions management
Community outreach

Expertise is drawn from the various DOI bureaus. The bureaus are listed below with a brief description of their responsibilities:

National Park Service: Manages more than 380 sites, including prime natural parks, historic and cultural areas, monuments, battlefields, seashores and lakeshores, and recreation areas. This bureau accommodates and educates more than 275 million visitors per year.

U.S. Fish and Wildlife Service: Responsible for the protection and conservation of fish, wildlife, and plants. Manages more than 700 field units, including national wildlife refuges, national fish hatcheries, law enforcement and ecological services field stations. Regulatory authority responsible for the international trade of plants and animals and the protection of U.S. endangered species.

Bureau of Land Management: Manages more than 270 million acres of public lands for such diverse uses as energy, minerals, and timber extraction, livestock forage, fish and wildlife habitat, and scenic and recreational uses.

Office of Surface Mining, Reclamation and Enforcement: Responsible for protecting people and the environment during coal mining and restoration, and for restoring mines abandoned before 1977.

U.S. Geological Survey: Responsible for scientific research and applications related to earth processes; natural disasters; and water, biological, energy, and mineral resources.

Bureau of Indian Affairs: For American Indians, Indian tribes and Alaska Natives, provides social services, promotes economic opportunity, and protects and improves trust assets.

Bureau of Reclamation: Manages 58 hydroelectric power plants and is the country's largest wholesale supplier of water.

Minerals Management Service: Manages the mineral resources on the outer continental shelf of the United States in an environmentally sound and safe manner. Provides fiscal accounting and management of the mineral resources both onshore and offshore.

The unique strengths of DOI technical assistance include:

DOI offers technical experts with a depth of applied technical knowledge, international experience, and relevant language skills.

DOI fosters direct, sustained exchanges between U.S. natural resource managers and their host-country counterparts. These are often direct government-to-government partnerships.

All salaries for DOI technical assistance are covered by the U.S. Department of the Interior. In fact, DOI contributes approximately \$25,000 in salaries for each \$50,000 of donor contribution.

With a large internal training staff, DOI can train the trainers to ensure long-term program sustainability.

DOI technical assistance is offered on a reimbursable basis. Donor funds cover the costs of travel and per diem of DOI technical staff, support for field activities, equipment, and program management. DOI covers the salaries of the technical experts on short-term assignments.

Following are descriptions of the progress achieved in the Department of the Interior's current initiatives. New material since the September 2003 Report is indicated in ***bold italics***.

CAMBODIA

SUMMARY OF ASSISTANCE

Cambodia is surrounded by several countries that, having hunted their own wildlife to extinction, have turned to Cambodia as a source of skins, bones, internal organs, and other wildlife products. The wildlife crimes perpetrated or abetted by traffickers in these countries have been well documented. Decisive and urgent action is necessary to protect Cambodia's remaining wildlife in the country's long-term economic, social, and environmental interests.

Tough enforcement measures alone may not be feasible due to lack of infrastructure and manpower and may even backfire. Commercial dealers and professional hunters are often responsible for encouraging poor villagers to poach. Currently, law enforcement officials find it difficult to reach the instigators and often end up arresting villagers who hunt for subsistence. Development assistance can provide villagers with economic alternatives, but it will not discourage opportunistic poaching. A combination of law enforcement and community participation is therefore required.

DOI is working in collaboration with Conservation International (CI) and WildAid to provide training for park rangers and protected area managers in areas of DOI expertise, and providing technical assistance to the CITES Secretariat in Phnom Penh.

FUNDING

\$50,000 from EAPEI in FY '02

RESULTS TO DATE

A DOI expert participated in a review team to assess the current state of data and information on the status and condition of Cambodia's forest resources. The DOI expert helped develop guidance and methods for the assessment of the current distribution, status, and value of Cambodia's forests and forest lands (July 2003).

A team of two U.S. Fish and Wildlife Service (FWS) experts on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) traveled to Cambodia to: (1) provide training to Government of Cambodia officials on the implementation of CITES, including appropriate permitting procedures to authorize the international trade in CITES-listed species; and (2) provide assistance in finalizing Government of Cambodia draft legislation for the implementation of CITES (June 2004).

DOI has completed a contract with WWF/TRAFFIC to procure needed equipment for the CITES Secretariat.

One FWS CITES expert returned to Cambodia to participate in a Government of Cambodia-sponsored review and debate on the draft CITES legislation (July 2004).

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

Equipment for the CITES Secretariat will be procured.

ADDITIONAL INFORMATION

Reports describing the results of DOI technical assistance in Cambodia are available upon request.

CENTRAL AMERICA – Mundo Maya

SUMMARY OF ASSISTANCE

The Mundo Maya (i.e., “Mayan World”) region, which encompasses approximately 500,000 square kilometers in Belize, El Salvador, Guatemala, Honduras and southern Mexico, connects the countries and regions that share a common Mayan heritage. This area, containing magnificent archaeological sites and large swaths of intact tropical forests, is facing development pressures from the more than five million Mayan descendants and others who currently reside there. Other ecological and cultural pressures include poaching of both archaeological artifacts and natural resources, and the growing numbers of tourists. In 1993, the Tourism Ministries of each of these five countries created the Mundo Maya Organization (MMO) in an effort to develop a coordinated regional strategy to promote sustainable tourism at the Mayan archaeological sites. The goal of the MMO, using both internal and external funding (e.g., from the InterAmerican Development Bank (IDB)), is to contribute to the sustainable economic and social development of the Mayan region through the establishment of regional circuits that offer cultural, ecological and adventure tourism.

DOI has signed a 5-year Memorandum of Understanding (MOU) with the MMO to provide technical assistance and training to any of the MMO countries. DOI has provided technical assistance to 12 selected Mayan sites in the areas of: protection and maintenance of the natural and cultural resources; visitor infrastructure, services, and education; capacity-building; and community participation. The DOI staff is working closely with in-country archaeologists, park managers, engineers, economists, and the local communities.

Starting with FY ‘03, the MMO and IDB will request technical assistance from DOI on a project-by-project basis.

FUNDING

\$6,000 from InterAmerican Development Bank in FY ‘03
\$70,000 from the InterAmerican Development Bank in FY ‘02

RESULTS TO DATE

DOI Management/Planning

DOI provided the MMO and IDB with a comprehensive report detailing DOI’s findings and recommendations for follow-up for each of the 12 MMO sites. These recommendations include descriptions of work that can be completed by DOI, including estimated costs (September 2002).

DOI completed an initial assessment trip, to all of the MMO-selected sites and provided recommendations for technical assistance and training that DOI can provide through December 2002 (February 2002).

Park Planning and Management Technical Assistance

Guatemala: A team consisting of three DOI staff (architect, planner, and educator) provided technical assistance to park staff at the Tikal and Yaxha-Nakum-Naranjo sites in Guatemala in the topics of park planning, visitor services, interpretation and education, and local community outreach (July 2002).

Honduras: A team consisting of three DOI staff (planner, educator, and park manager) provided technical assistance to park staff at the Copan and Rio Amarillo sites in Honduras in the topics of park planning, visitor services, interpretation and education, and local community outreach (June 2002).

Park Infrastructure Evaluation and Planning

Guatemala: A DOI team (one architect and one landscape architect) evaluated and provided recommendations on the siting and design for a visitor center and other necessary structures (e.g., administrative offices and staff dormitory) for the Yaxhá-Nakún-Naranjo Natural Monument. The IDB was funding this construction project through its Sustainable Development of the Petén Program, and wanted to ensure the most effective use of its funds. Based on the DOI recommendations, and with the support of on-site stakeholders, the visitor center was relocated to a more appropriate site and the design was altered to allow for improved visitor flow, safety, and an incorporation of sustainable design principles (i.e., principles of conservation including using energy, water, and other resources more efficiently) (January 2003).

Success Story

When an IDB program manager informally met with a DOI team in Guatemala, he was so impressed by the DOI's team recommendations that he immediately halted an ongoing visitor center construction project and hired DOI to improve the design and utility of the visitor center. Work on the center has since resumed, following the DOI recommendations.

El Salvador: A team of DOI staff conducted a comprehensive infrastructure evaluation of the natural park complex called "Complejo Los Volcanes" which consists of three relatively small protected area subunits located within a complex of volcanoes. The team provided recommendations that will increase visitor enjoyment and education of the park, including improvements to park interpretation/education services and visitor buildings (September 2002).

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

None. Activities are completed as requested by the IDB or MMO.

ADDITIONAL INFORMATION

Reports describing the results of DOI technical assistance on the Mundo Maya project are available upon request.

CENTRAL AMERICA – Regional Fire Program

SUMMARY OF ASSISTANCE

At the request of the U.S. Agency for International Development/Guatemala – Central American Programs (US AID/G-CAP), the Department has launched a new 2-year \$1.2 million program of technical assistance focused on fire management and forest pest control in Central America.

The work will involve the following countries: Mexico, Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, and Panama. The points of contact for these countries are each country's Forest and Pest Committee members under the Commission on Central American Environment and Development (CCAD), an organization consisting of the Ministries of the Environment for each of these countries. Due to Mexico's extensive experience and capabilities with forest fires and forest pest management, DOI will work closely with its Mexican counterparts in increasing the coordination, prevention, and response capabilities of the other seven countries.

Under this program, the Department will coordinate and manage:

1. Technical assistance, training, study tours and workshops designed to improve existing national and local fire management strategies and their implementation throughout the Central American region.
2. Issuance of small sub-contracts within each country used to respond to local needs concerning fire and forest pest prevention and mitigation.
3. Efforts to develop with national governments an economic rationale for line item funding of forest fire and forest pest management activities and a system for decentralizing funding to appropriate agencies.
4. Efforts to develop fire and forest pest training and outreach material.

FUNDING

\$500,000 in FY04 from USAID/Guatemala – Central America Regional Programs

\$700,000 in FY04 from USAID/Guatemala – Central America Regional Programs

RESULTS

Planning and Administration

Program Workplan Development: DOI-ITAP managers have actively participated in several meetings and workshops with the various stakeholders, gathering as much information and input as possible, to develop a comprehensive workplan through consensus. Included among these events are:

DOI met with USAID/G-CAP and CCAD in El Salvador to make final changes to Program Workplan, Budget, and Chronology of Events, which have been approved by all and ready to implement (July 2005).

DOI and USAID/G-CAP finalized the Program Draft Workplan, Budget, and Chronology of Events (June 2004), and distributed to all USAID offices in Central America and Central American government agencies involved in fire and pest management, for final review and revisions (June 2004).

USAID/G-CAP staff met with DOI at the Department of the Interior offices in Washington, DC, to work on a Budget for the Draft Workplan developed with CCAD input during the April meeting (May 2004).

DOI participated with USAID/G-CAP in an initial workshop with CCAD to determine the regional priorities regarding forest fire and pest management and develop the Draft Workplan for this program (April 2004).

DOI participated in a Central America and Caribbean Regional Fire Management Workshop with staff from USAID offices, non-governmental organizations and the private sector, held in the Dominican Republic. DOI gave a well-received presentation introducing the new Central American Fire Management Program. The purpose of this meeting and its presentations was to ensure a wide and effective collaboration and sharing of fire management lessons learned (March 2004).

DOI met with USAID/Mexico, U.S. Forest Service (USFS) staff, and Mexican Government staff in Mexico City. These meetings were critical to initiate an effective integration with the Mexico Fire Management Program being run by USAID/Mexico with the technical assistance of the USFS. Mexico fire management is generally well ahead of most of the rest of Latin America and could benefit the Central American countries as a role model and through its lessons learned (March 2004).

DOI met with USAID/G-CAP in Guatemala City to initiate data gathering and interview key staff for Program background and expectations (February 2004).

Hiring of Half-Time Fire Manager: Timothy Bradley, National Park Service Fire Ecologist from Whiskeytown National Recreation Area in northern California, has been brought on a reimbursable half-time detail to DOI-ITAP to coordinate the Central America Fire Management Program. Mr. Bradley will continue to work from his home base while managing this program (January 2004).

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

DOI will contract a Central American non-governmental organization (NGO) for much of the workshop/training logistics and on-the-ground project monitoring and evaluation, saving program funds by greatly reducing travel distances.

DOI, USAID/G-CAP and CCAD will select the 1 or 2 projects per country that will be funded to improve local forest fire and pest management. Once selected, the funds will be transferred and project implementation will begin.

DOI will support first Regional training course to be held in Costa Rica on “Economic Valuation on the Environmental Damage Caused by Forest Fires in Central America.” Representatives from each country are invited to this course.

ADDITIONAL INFORMATION

Reports describing the results of DOI technical assistance on the Central America program are available upon request.

COLOMBIA

SUMMARY OF ASSISTANCE

Colombia's extraordinary national parks system encompasses some of the world's most biologically diverse tropical forests. The U.S. Congress has noted that these protected areas are among Colombia's greatest natural resources and that they represent a huge potential source of income via eco-tourism. As such, the U.S. Congress slated \$3,500,000 for USAID/Colombia to devote to training, equipment, and other assistance to enhance the Colombian national parks.

In October 1998, the U.S. Department of the Interior signed a Framework for Cooperation with the Colombian Ministry of the Environment, which was approved by the U.S. State Department. It remains operational and outlines a variety of cooperative activities, but is subject to the availability of funds and personnel of each party.

At the request of USAID/Colombia, DOI and the Colombian National Parks Unit (CNPU) are now embarking on an effort to improve the overall management of the Colombian Park system. DOI and CNPU will work to meet identified needs at the headquarters, regional, and park levels. Identified needs include: equipment purchase and delivery; infrastructure design, planning and construction; increased staffing in protected areas; and staff training.

FUNDING

\$3,500,000 from USAID/Colombia in FY '04

RESULTS TO DATE

None

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

DOI and CNPU will submit a life-of-project workplan to USAID/Colombia.

DOI will issue all contracts associated with this project.

ADDITIONAL INFORMATION

A technical proposal describing proposed DOI technical assistance in Colombia is available upon request.

ECUADOR

SUMMARY OF ASSISTANCE

DOI is providing technical assistance to help the USAID/Ecuador Mission accomplish Strategic Objective 1: Biodiversity conserved in selected protected areas and their buffer zones. DOI is providing technical assistance to The Nature Conservancy and its partners – Fundación Antisana and Fundación Ecologica Rumicocha – on key components of The Nature Conservancy’s Project Bioreserva del Condor in five of Ecuador’s high Andean protected areas: Cayambe-Coca Ecological Reserve (403,103 hectares), Antisana Ecological Reserve (120,000 hectares), Cotopaxi National Park (33,393 hectares), Sumaco Galeras National Park (205,249 hectares) and the Cotacachi Cayapas buffer zone. DOI is also providing technical assistance to CARE and its partners – Ecociencia and Jatun Sacha – on the SUBIR project and the Southern Border Development Program, and to Charles Darwin Foundation and Galapagos National Park in support of conservation in the Galapagos Islands.

FUNDING

\$100,000 from USAID/Ecuador in FY ‘02

\$100,000 from USAID/Ecuador in FY ‘01

\$100,000 from USAID/Ecuador in FY ‘00

\$100,000 from USAID/Ecuador in FY ‘99

\$50,000 from USAID/Ecuador in FY ‘98

RESULTS TO DATE (FY ‘01 TO PRESENT)

Andean Highlands

Training: DOI has provided training and technical assistance to Ecuadorians associated with the Condor Bioreserve Project in:

- Condor reintroduction;
- Relevant, practical, and effective environmental education techniques;
- Interpretation and interpretive planning;
- Development of ecotourism activities;
- Protected area management;
- Biological monitoring;
- Aquaculture and the development of recreational fishery opportunities; and
- Resource valuation.

Bear Research Project:

DOI sponsored one Ecuadorian spectacled bear researcher to present a paper at the 14th International Conference on Bear Research and Management in Norway (August 2002).

A DOI bear expert reviewed the existing spectacled bear research project. Activities included reviewing and revising statistical modeling procedures (e.g., census protocols) and presenting

a workshop on habitat analysis. Workshop participants included 18 scientists from Colombia, Venezuela, and Ecuador (May 2002).

DOI assisted Ecociencia with further research on Ecuadorian spectacled bear habitat in the Condor Bioreserve (September 2004).

Resource Inventory and Monitoring: A DOI team spent 3-weeks providing assistance to Cotopaxi National Park staff and Ecuadorian NGOs, coordinating a monitoring needs assessment, providing training in resource monitoring, and working with the park and NGOs to develop a resource monitoring plan. The plan includes tracking wildlife sightings, vegetation changes, photographic monitoring of fire impacts and ecosystem recovery, and record keeping of park visitation and visitor use impacts, among other trends (May 2004).

Visitor Center Development: One DOI interpretive planner traveled to Cotacachi Cayapas Ecological Reserve and the Quito Zoological Park to meet with Ecociencia staff to assist with the planning and design of interpretive centers (July 2002).

DOI Assistance to Fundación Antisana: Fundación Antisana is a local NGO working on water resource issues and the protection of Antisana Ecological Reserve, a high Andean protected area located southeast of Quito. A workshop was conducted that focused on regional water resource development issues and financing the protection of environmental services provided by the ecological reserve. Increasing demands for water from Quito and other communities, including proposals to tap into Antisana's water resources, motivated this request for DOI assistance. DOI conducted media interviews with Radio Bolivar and Quito's principal television station, Gamavision, as part of the effort to better inform the public about the issues of water resource development and environmental protection (July 2001).

Environmental Educators' Network: DOI organized a network of environmental educators in the condor bioreserve area. This network ties all of the environmental education efforts in the area to common objectives. DOI has provided follow-on technical assistance to the environmental educator's network in: the preparation and presentation of a theme-based program; interpretation for park guards; zoo interpretation; classification and techniques for working with different age groups and audiences; ecological clubs; interpretive planning; and the history, philosophy and theory of environmental education.

- ***Train the Trainers: DOI interpreters worked with Peace Corps/Ecuador and the El Chaco municipality to provide a train-the-trainers workshop for Peace Corps Volunteers and Ecuadorian counterparts on environmental education and interpretation (September 2004).***

Galapagos Islands

Aerial Photography: DOI provided technical assistance in aerial photography, using the Seawolf aircraft procured by DOI in 2003 for Galapagos National Park. A DOI expert trained park staff in the use and maintenance of aerial photographic equipment and data analysis. High resolution aerial photographs will enable the park to keep detailed data of strategic conservation sites, in order to monitor natural phenomena such as fire and drought, and man-made threats such as oil spills. In addition, the data can be used to perform multi-temporal analysis of visiting, breeding

and nesting sites for migratory birds and other wildlife, as well as critical sites of human or natural interference (May 2004).

Museum Curation: DOI sponsored 3-weeks of intensive museum curation training for Carlos Villon, a Galapagos National Park staff member. The training was located at the California Academy of Sciences in San Francisco which houses the largest collection of Galapagos biological materials outside of the Galapagos. Villon is expected to apply the training to revamp the museum collection on the Galapagos (February 2003).

Isabela Island Ecotourism: DOI provided two experts to assist in the development of an ecotourism plan and an environmental assessment for the Isabela Island unit of the Galapagos Islands National Park. Their work included working with all relevant partners to develop a scope of work and terms of reference for initial program components, which include community organization, a socioeconomic study and the development of an ecotourism plan (March 2002).

DOI worked with staff from USAID/Ecuador and Galapagos National Park to develop Terms of Reference (TORs) for the Isabela Ecotourism development project. The TORs will be used as a basis for contracting this project out to the private sector. DOI's assistance has been requested for certain specialized areas of this project (July 2001).

Interpretation/Exhibits: DOI worked with the Galapagos National Park to design, construct and install interpretive and destination signs at trail heads in newly established trails within the Park and to train personnel in the design, construction, and installation of park signs. DOI also helped establish a list of equipment needs for future signs. Most of the sign work occurred on the island of Isabela (July/August 2002).

Success Story

USAID/Ecuador reports that the signs installed with DOI technical assistance are
“the best in the Galapagos!”

DOI worked with the Charles Darwin Research Station to provide recommendations to upgrade terrestrial and marine exhibits at the Van Straelen Interpretation Center on Puerto Ayora. Recommendations were also provided to the NGO Ecociencia regarding interpretive planning and exhibit development (May 2001).

A DOI representative provided assistance in the design and construction of interpretive panels to be displayed in the new visitor center on Isabela Island, Galapagos National Park (June 2003).

Fisheries Database Assistance:

Follow-up assistance on the fisheries database has included the addition of stock assessment numbers for both sea cucumbers and spiny lobsters at the Charles Darwin Research Station (July 2002).

DOI worked with the Charles Darwin Research Station on the management of their fisheries database. Efforts included cleaning and reinstating the integrity of the database; establishing

a security system; and training staff to effectively maintain and utilize this database (June 2001).

Invasive Species Assistance:

A DOI representative provided technical assistance on the eradication of the introduced puddle frog, a nonnative species to the Galapagos which is having a serious adverse impact on Isabela Island's wetlands resources. The control of this invasive species is viewed as an extremely urgent management issue. Follow-up technical assistance via email has been provided (May 2002).

A DOI representative participated in the Technical Advisory Group for Invasive Species in Galapagos Islands National Park and provided follow-on technical assistance and advice regarding control of invasive amphibians (June 2003).

A DOI representative provided technical assistance in the design and construction of native gardens on Isabela Island, Galapagos National Park (August 2003).

Law Enforcement:

DOI is providing ongoing training in law enforcement to the park guards of Galapagos National Park. DOI provided basic training as well as more advanced law enforcement training on techniques for control and surveillance. The training consisted of classroom time as well as many practical exercises. In addition, relevant equipment was provided to the park guards, including small tents, sleeping bags, flashlights, Leatherman tools, night vision binoculars, video cameras, digital cameras, GPS portable units, boots, and rain gear. The DOI agents also worked with their counterparts to develop practical law enforcement forms. The law enforcement technical assistance was provided by DOI law enforcement special agents during the initial training period April/May 2000 and in conjunction with the international NGO WildAid during the more advanced training course in September/October 2001.

DOI conducted advanced marine law enforcement training in conjunction with WildAid (August 2003).

DOI worked with Galapagos National Park to design and procure a set of custom-designed badges for official law enforcement personnel. These badges will now easily and readily identify law enforcement personnel to park users. The badges will be distributed by the Park and USAID in an official ceremony at the end of the marine law enforcement training scheduled for February 2005 (August 2004).

A DOI law enforcement expert spent 3.5 days aboard the Guadalupe River providing one-on-one training to park guards and observing the enhanced law enforcement capabilities of the newly refurbished Guadalupe River (September 2004).

DOI provided a short law enforcement overview for the Bosque Protector Cerro Blanco Protected Area in Guayaquil, Ecuador (September 2004).

Marine Biological Monitoring: DOI led the effort to revise and upgrade the Galapagos Islands biological monitoring program to include the newly designated marine reserve (May/June 2000).

Marine Reserve Plan Development: DOI has provided technical assistance to Ecuadorians working with Galapagos National Park and the Charles Darwin Research Station on the development and implementation of a marine reserve management plan (July 1999).

SUBIR Project

NGO Assistance: DOI conducted road location and timber harvesting short courses with nongovernmental organizations in Quito and at selected field sites. This assistance was a continuation of previous technical assistance on appropriate road development for community forestry under the SUBIR project (September 2001).

Remote Sensing Technology Assistance: DOI is providing technical assistance on remote sensing techniques for sustainable community forestry purposes. A workshop was held focusing on the principles of vegetation inventory using satellite imagery and imagery processing techniques. Protocols were written up and developed into manuals. A formal link was established between the National Science Technology Center in the U.S. and the SUBIR project to facilitate SUBIR's continued access to the most up-to-date technology and promote ongoing training and exchange opportunities. Ongoing technical assistance -- via email -- is being provided on remote sensing issues as they relate to refining photo-interpretation technology for sustainable community forestry (May 2001).

Protected Area Management

Training Program:

Six Ecuadorian protected area managers attended the 3rd annual Wildlands Management in the Tropics training program in Costa Rica, which is managed by the Organization for Tropical Studies. Two of the trainees were from indigenous communities (August/September 2001).

DOI sponsored five Ecuadorians to participate in the 4th annual Wildlands Management in the Tropics course in Costa Rica (August/September 2002).

DOI sent four participants from Ecuador to the 5th annual Wildlands Management in the Tropics course in Costa Rica (October/November 2003).

Project Coordination

A DOI Project Manager and marine law enforcement expert traveled to Guayaquil and the Galapagos. The Project Manager:

- *met with USAID/Ecuador, Mexican fisheries experts, an IUCN fisheries representative, and Ecuadorian counterparts to plan a Galapagos/Mexico fisheries exchange;*
- *met with the head of the Guayaquil Environment Department and reviewed potential projects with him regarding the City of Guayaquil; and*

- *met with Executive Director of the Bosque Protector Cerro Blanco and planned a 1.5 day law enforcement overview for Bosque Protector Cerro Blanco protected area.*

With the marine law enforcement expert, the Project Manager:

- *reviewed operations of the Seawolf aircraft and Guadalupe River patrol vessel. On the aircraft, the team conducted a 4.25 hours overflight of the marine reserve, observing law enforcement efforts (September 2004).*

The DOI Project Managers traveled to Quito and the Galapagos to meet with USAID/Ecuador and local partners. Technical assistance projects were planned for the rest of the fiscal year (March/April 2004).

SIGNIFICANT PROBLEMS OR DELAYS

A DOI marine law enforcement course for Galapagos National Park marine reserve guards was planned for September 2004, but had to be postponed when the sea cucumber fisheries open season was rescheduled for August-October. Galapagos law enforcement personnel are responsible for enforcing sea cucumber fisheries regulations during the open season, and would not be able to send a group of staff to a training course. The course has been rescheduled for early 2005.

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

In October/November 2004, DOI plans to work with USAID/Ecuador to contribute to a USAID Mission Director request for a professional exchange between Galapagos fishermen and their counterparts in the U.S. or in Mexico.

In December 2004, DOI and Fundación Antisana of Ecuador will conduct a workshop for two dozen representatives from local nonprofit and community organizations on tools and techniques for assessing and evaluating the impacts of water resources development, with a particular focus on the impacts of surface water diversions and dams.

ADDITIONAL INFORMATION

Reports describing the results of DOI technical assistance in Ecuador are available upon request.

ECUADOR - Galapagos Islands Equipment

SUMMARY OF ASSISTANCE

Galapagos National Park includes one of the largest marine reserves in the world, covering approximately 133,000 square kilometers. As a UNESCO World Heritage Site, Galapagos National Park is recognized internationally as one of the most ecologically important and unique aquatic ecosystems in the world.

Conservation of Galapagos National Park remains a major challenge. Conflicts in recent years between fishermen and local conservation authorities have led to fierce rhetoric and violent action, and pressures from powerful stakeholder groups can dominate decision-making at the expense of conservation and responsible resource management. Endangered species such as sea cucumber and lobster are being exploited to the point of local extinction, and the national government and Galapagos Park authorities are hard-pressed to enforce regulations with limited budgets and capabilities. There are also circumstances of trafficking between the islands and other countries in chemical precursors for drug production. At the same time, this is an economically strategic part of the country, providing a large share of Ecuador's tourism income.

DOI has signed an Interagency Agreement with USAID/Ecuador to provide, on behalf of USAID/Ecuador, technical support for enforcement activities. Under this agreement, DOI is tasked with purchasing specialized equipment to be used in enforcement and monitoring activities in the Galapagos Islands.

FUNDING

\$2,000,000 from USAID/Ecuador in FY '02

RESULTS TO DATE

Assessment and Planning

Procurement Plan: DOI completed a procurement plan which was approved by USAID/Ecuador (December 2002).

Needs Assessment: DOI provided a law enforcement special agent to assess law enforcement equipment needs in the Galapagos and to draft a plan of action for acquiring the equipment and training protected area staff on the use and maintenance of this equipment (April/May 2002).

Equipment Procurement

Seawolf amphibious plane: After extensive research, DOI determined that the Seawolf is the ideal plane for Galapagos law enforcement. The Seawolf is the only single engine, boat hulled, and amphibious aircraft in the world that is approved by the Federal Aviation Administration. Unlike any other light aircraft, the Seawolf is especially constructed to be used in the saltwater environment. A contract was awarded in January 2003 to Lake Aircraft to custom-build this plane for Galapagos National Park. The plane construction was completed and a Galapagos

National Park pilot and mechanic were trained in the specific use and maintenance of the plane. The plane was delivered to the Park and donated during a ceremony with the U.S. Ambassador to Ecuador (December 2003).

Retrofitting the Guadalupe River: The Guadalupe River is a 100-foot aluminum vessel used by Galapagos National Park to conduct short and long-term law enforcement patrols, ferry employees and supplies among the many islands of the archipelago, and conduct scientific research. This is a crucial piece of equipment to the Galapagos National Park and its safe and efficient operation is paramount to successful operations there. DOI awarded a contract to Seacraft Shipyard Corporation to repair and retrofit the Guadalupe River in March 2003. The retrofitting is completed and the Guadalupe River has returned to the Galapagos (August 2003).

Field Equipment: DOI has procured six complete sets of camping equipment to enable Park Guards to set up temporary base camps for remote surveillance of protected areas. The equipment was shipped to the Park aboard the Guadalupe River. Two aluminum boats were purchased for the Park and were shipped to the Park aboard the Guadalupe River (August 2003).

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

None. All activities are completed.

ADDITIONAL INFORMATION

Reports describing the results of DOI technical assistance in the Galapagos are available upon request.

GEORGIA – Protected Areas Development Project

SUMMARY OF ASSISTANCE

DOI has established a long-term working relationship with the Republic of Georgia to foster a national system of protected areas in Georgia. The working relationship was formalized in a MOU which created a general technical assistance program and a specific sister park relationship.

With funding from USAID/Georgia, DOI has been working to develop Lagodekhi Nature Reserve as a pilot protected area that can serve as a model for conservation, education and interpretation, law enforcement, and search and rescue activities for Georgia's protected area system.

Lagodekhi Nature Reserve is an area of high biodiversity -- combining both relic and endemic plants with rare animal species. The Reserve has significant tourism potential given its natural beauty and proximity to Tbilisi, the nation's capital.

Lagodekhi is considered to be the Yellowstone of Georgia, having been established in 1912 as the first Reserve in the country. The establishment of Lagodekhi signaled the recognition that certain areas of the country should be set aside for preservation. Village residents observed and supported the founding of the Reserve. Today's economic climate, though difficult, has not changed the overall support the Reserve enjoys. Views from around the Reserve vividly illustrate the conditions that might prevail if the Reserve were not protected. Overgrazing and logging, to say nothing of subsistence hunting, would soon consume the small Reserve's resources.

DOI is providing technical assistance on the development of visitor services within the Reserve, including a nature trail and entrance facilities. DOI is also providing technical assistance on law enforcement, to help Lagodekhi staff protect the Reserve's wildlife from poaching.

A new source of funding from the World Bank Global Environmental Facility (\$9.0 million) assists the development of five protected areas in the Republic of Georgia: Lagodekhi Nature Reserve, Vashlovani Proposed National Park and Nature Reserve, David Garegi Proposed Protected Area, Tusheti Proposed National Park and Protected Landscape, and Kolkheti National Park. DOI is currently working with the Global Environmental Facility to develop a plan of technical assistance to support its Protected Areas Development Project.

FUNDING

\$50,000 from USAID/Georgia in FY '00

\$200,000 from USAID/Europe and Eurasia Bureau in FY '99

RESULTS TO DATE

Lagodekhi Nature Reserve: With program funding, DOI has assisted the staff of Lagodekhi to:

Design and construct central entrance facilities. Lavatory facilities have been constructed. A 1.7 km long fence to prevent illegal grazing of livestock has been installed (June 2001).

Perform necessary maintenance on an administration building. The roof has been repaired, with new iron sheeting and rain-gatherers installed (June 2001).

Refurbish buildings. Two buildings near the entrance gate, parking, and other necessary visitation infrastructure at Lagodekhi National Park were refurbished to design specification (June 2001).

Design and construct a 4-km central nature trail to the waterfall. A 14-m long wooden bridge over a small river has been built. Major cleanup and ground works (e.g., excavations, scouring of soil, etc.) on a trail have been completed (November 2000).

Designed a logo and uniform patch for Lagodekhi National Park (December 1999).

Protected Area System

Assessments/Planning:

Paata Shanshiashvili and the new PAD director visited the U.S. for training and participated in planning meetings in Washington, DC (August 2003).

U.S. Forest Service personnel provided preliminary training and technical assistance in landscape-level planning. The Forest Service team developed a detailed workplan for follow on technical assistance over the 5-year life of project (July 2003).

ITAP developed a plan of work for CY '03 to provide technical assistance and training in a variety of key areas, including management planning, law enforcement, central office operations, the development of ecotourism materials, and landscape-level planning (January 2003).

DOI staff prepared a long-term mission statement for Georgia's protected areas management. In addition, they identified changes in legal authorities needed to meet expanded management objectives and drafted a Presidential Decree used to achieve the new organizational structure and mission of the Department (November 1999).

With World Bank funding, a DOI team conducted an assessment of Kolkheti Wetlands National Park in western Georgia and advised the World Bank project team of the Park's critical needs to protect resources and establish immediate management. Kolkheti is a sister park with Point Reyes National Seashore in California (November 1999).

DOI completed an institutional analysis of the Department of Protected Areas, including a cost assessment of the equipment, facilities and infrastructure improvements for the Department (October 1998).

Training/Outreach:

DOI sent a team to Georgia to concentrate on operationalizing existing management plans at Vashlovani, Tusheti, and Lagodekhi National Parks (October 2003).

DOI sent a team to Georgia to work with the Georgian protected area central office to initiate reorganization of the central office, help finalize position descriptions, encourage hiring of new staff, and complete reorganization charts (October 2003).

A team of DOI specialists from NPS and USFWS provided 2-weeks of training to Georgian protected area staff on field-level protected area management, law enforcement, and search and rescue. The DOI team also developed a workplan for follow on technical assistance over the 5-year life of project (June 2003).

DOI officials conducted specially designed park management seminars and study tours of U.S. national parks with Georgian park managers and parliamentarians (April 2000).

A DOI team conducted a workshop with Georgian resource managers and other stakeholders to review the proposed reforms and ensure public participation (November 1999).

DOI organized a 2-week study tour in Washington, D.C. and Alaska to show a group of high-level government officials from the Republic of Georgia how the U.S. manages federal lands and protected areas (July 2004).

Sister Parks Network: DOI established a network of sister parks, linking several national parks in the U.S. with ecologically appropriate counterparts in eastern Georgia. The U.S. parks have provided excess trail-building and maintenance tools and uniforms to their Georgian twins (November 1999).

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

DOI is planning to send a team to Tbilisi in December 2004 to push forward recommendations on the restructuring of the Georgia Protected Areas Department.

ADDITIONAL INFORMATION

Reports describing the results of DOI technical assistance in Georgia are available upon request.

GEORGIA – Kolkheti National Park

SUMMARY OF ASSISTANCE

DOI has launched a second working relationship with the Republic of Georgia to provide targeted technical assistance in interpretation at Kolkheti National Park. Kolkheti National Park is located in West Georgia, covering an area of 28,571 ha of land and 15,742 ha of marine territory. The park was established in 1999 as part of Georgia's Integrated Coastal Management Project with the financial support of the World Bank and the Global Environment Facility. The national park incorporates the Kolkheti State Reserve established in 1947 (500 ha) and the adjacent wetlands, as well as the Paliastomi Lake. Kolkheti is a designated RAMSAR site.

DOI technical assistance will be focused on various aspects of interpretation, including:

- Trail design and construction;
- Trail interpretation, including signage and brochures;
- Visitor facility design, including entry points, kiosks, visitor centers, campsites;
- Design of interpretive materials, such as displays, brochures, posters;
- Develop public outreach and education programs;
- Training in oral interpretation

FUNDING

A total of \$63,168 from the World Bank in FY '04

RESULTS TO DATE

A team of three FWS experts traveled to Georgia in May 2004 to conduct an assessment and provide preliminary interpretive technical assistance. The team developed a work plan for interpretive technical assistance through December 2004.

A second team of interpretive experts worked on developing an interpreted visitor trail in Kolkheti National Park in July 2004.

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

A team of three interpretive experts will provide technical assistance on the establishment of a visitor center in Kolkheti National Park (December 2004).

ADDITIONAL INFORMATION

Reports describing the results of DOI technical assistance in Georgia are available upon request.

GUATEMALA

SUMMARY OF ASSISTANCE

The 1.5 million hectare Mayan Biosphere Reserve, located in the northern Department (state) of El Petén, forms the core of the largest tract of intact tropical forests remaining in Meso-America. This area is one of the most important regions in the world in terms of biological diversity. DOI is working closely with USAID/Guatemala office and the Guatemalan protected area management agency, Consejo Nacional de Areas Protegidas (CONAP), to strengthen protected area management in the Mayan Biosphere Reserve.

DOI technical assistance in the Reserve is designed to promote and enhance coordination among managing entities within the Reserve and enhance coordination, interaction, and cooperation between U.S. and Guatemalan protected area staff. It is intended that this program of technical assistance in the Mayan Biosphere Reserve will help CONAP develop model strategies that may be extended throughout Guatemala's protected area system.

DOI technical assistance was also conducted in other geographic areas of the country, including the Volcanoes of Atitlán, located in the western highlands, the Polochic-Motagua wildlife area in the eastern lowlands, and the Chisec area in northern Alta Verapaz.

Due to the recent consolidation of USAID functions worldwide, the USAID/Guatemala office is scheduled to close on September 30, 2004, with future Guatemala assistance to be provided by the USAID Central American Regional office (USAID/G-CAP). As such, all DOI activities conducted for USAID/Guatemala will be completed by September 30, 2004.

FUNDING

\$75,000 from USAID/Guatemala in FY '04
\$100,000 from USAID/Guatemala in FY '03
\$200,000 from USAID/Guatemala in FY '01
\$100,000 from USAID/Guatemala in FY '00

RESULTS TO DATE

Tourism, Visitor Services, and Interpretation

Trail and Tourism: Two teams of DOI representatives provided technical assistance at two significant and largely undeveloped protected areas in Guatemala to advise on how best to further develop the two protected areas that would attract more visitors and offer improved visitor experiences in a sustainable manner. The two sites, the Sierra de las Minas National Park, a high mountain range that culminates in extensive cloud forests, and "Bocas del Polochic," a tropical river delta, are adjacent to each other and, together, boast among the highest biodiversity in Central America. Further, "Sierra de las Minas" serves as the primary watershed for potable water for the country. DOI-ITAP worked with staff of the Guatemalan Parks Service (CONAP), The Nature Conservancy (who co-manages these two sites with

CONAP), and other smaller non-governmental organizations to ensure that the best recommendations are provided. (April/May 2004).

Lake Atitlán Community Tourism: Two DOI staff worked with a Guatemalan nongovernmental organization (NGO) and local community leaders in several towns of the Lake Atitlán region, to improve interpretative trails for tourists. The trails under development, all community managed, focus on the anthropology, biological resources, geological resources, and textiles of the area. One nature trail goes up to the summit of San Pedro Volcano. Other trails focus on particular cultural highlights (e.g., growing and processing organic coffee, learning about alternative medicines, subsistence fishing on the lake, etc.). The team came up with many design and visitor management recommendations which were formally presented to the community leaders and the NGO (January 2004).

Law Enforcement

***Security 3rd Workshop:** Rodrigo Botero was invited by the Guatemalan government yet again to provide follow-up security consultations. Through the workshops he led in both Guatemala City and the Petén Region, the proposed Security Strategy has evolved into a larger-scaled “Strategy to Strengthen the Governance and Environmental Management of Protected Areas of the Petén Region.” Mr. Botero has drafted the initial version of this strategy (August 2004).*

***Security 2nd Workshop:** Rodrigo Botero, a Regional Director from the Amazonian Region of the Colombian National Parks Service, who participated in the January '04 workshop, was invited to provide follow-up consultations. Through this effort, Mr. Botero advised on key security options as the Guatemalans develop a new “Security Strategy for Protected Areas in the Petén Region” (July 2004).*

Security Workshop: DOI-ITAP invited, coordinated and covered the expenses to have three Colombian National Park Law Enforcement specialists join a DOI-NPS law enforcement specialist to spend three days assessing the Mayan Biosphere Reserve security situation in the Petén Region. The team of four spent 2-days as the guest experts of the first-ever “Security Workshop” in this region, advising Guatemalan park staff, Guatemalan military, and representatives from various local nongovernmental organizations on various methods for addressing the numerous security threats in the region, which include illegal extraction of timber, wildlife, and archaeological resources, in addition to ever-increasing drug and human trafficking (January 2004).

Cultural Resources

Archaeological Resources Management Evaluation: A DOI archaeologist joined a team of USAID and NGO resource managers to evaluate the quality of the protection of the archaeological resources that are under the jurisdiction of community-managed concessions within the Mayan Biosphere Reserve. These communities have been granted the rights to sustainably extract the natural resources (e.g., timber, rubber, xate) from a specifically designated area, an area that also contains many explored and unexplored ancient Mayan archaeological sites. Through this evaluation, it was determined that the archaeological

resources have been relatively well protected, similar to the natural resources, due to the interests granted to these communities (April 2004).

Fire Management

Radio System: *DOI has purchased and delivered to the Peten region four (4) Base Radios, sixteen (16) Portable Radios, three (3) solar panel systems to power these radios and other accessories (antennas, cables, telescopic poles, etc.) to be used to improve their existing communications system. Improved communications is critical for effective fire response, law enforcement activities, and search and rescue missions.*

Weather Stations: DOI has purchased and delivered to the Peten region ten (10) portable weather stations to be used to monitor changing weather conditions in an effort to better respond to fires within this region. The weather stations delivered include various accessories, such as solar panels, mounting tripods, weather link downloader, and necessary software and palm personal data assistant for data downloading and manipulation (June 2004).

Fire Management Evaluation: A DOI fire ecologist, with the assistance of the DOI-ITAP Central American Fire and Pest Management Program Manager, conducted a rapid assessment of the existing fire management program at the Sierra de las Minas National Biosphere Reserve and held a series of meetings and trainings with the local staff in order to prepare them further for the upcoming fire season. Previously, U.S. Forest Service staff had worked intensively with the Biosphere staff for a number of years to help improve their fire management capabilities. While the DOI-ITAP team concluded that the Reserve staff has a good understanding of the primary issues facing them and has developed a solid integrated strategy to address these issues -- well ahead of most protected areas in Guatemala -- significant challenges were identified for the management of long-term ecological effects of high fire incidence. DOI-ITAP recommended additional training and planning that would help meet these challenges (April 2004).

ICS, Fire Control, and Prescribed Burning Training: A team of three DOI fire fighters trained more than 30 Guatemalan fire fighters in the Petén Department on: the Incident Command System, fire control and prescribed burnings. This training helped to prepare the Guatemalans for their upcoming fire season (one month later) (January 2004).

Fire Fighting in Macaw Nesting Area: At the request of USAID/Guatemala, DOI contracted, on an emergency basis, a local non-governmental organization, the Wildlife Conservation Society (WCS), to hire and combat extensive wildfires that threatened a sensitive scarlet macaw nesting area, located within the Laguna del Tigre National Park. WCS has been monitoring the reproductive success of the macaws in this area (comprising 80 percent of the macaw nests known in Guatemala) as a key indicator of the ecological integrity of this protected area. As a result, WCS successfully prevented the fires from destroying this area, despite the long and damaging fire season experienced throughout Guatemala this year (June 2003).

Fire Prevention Planning and Educational Materials: Six key mid- to upper-level Guatemalan managers that have a role in fire management for the entire country worked with two DOI fire

management staff on developing Guatemala's first fire prevention and education materials to initiate a nationwide fire prevention campaign (June 2001).

Basic Fire Fighting Training: Thirty Guatemalan Mayan Biosphere Reserve fire fighters were trained by DOI fire management experts on the basics of fire suppression and control, and health and safety (March 2001).

Fire Fighting Organization and Emergency Response Training: Fifteen mid-level Guatemalan managers that have a role in fire management within the Mayan Biosphere Reserve were trained on the Incident Command System (ICS). ICS is the system used by the U.S. to properly organize and allocate resources to maximize fire fighting effectiveness and efficiency (March 2001).

Fire Management Study Tour to U.S.: A Fire Management Study Tour was conducted at the U.S. National Interagency Fire Center (NIFC) in Boise, Idaho. The 16 Guatemalan government officials participating in the study tour learned about U.S. approaches to fire management, including organizational, technical, budgetary, educational, and restoration issues (October 2000).

National Resources Management

Golden-Cheeked Warbler Study Tour: Four managers from two Guatemalan protected areas conducted a study tour to three protected areas in central Texas, visiting sites managed by Federal, State, and City governments. Of special interest was an exchange of information about the threats to the habitats of the Golden-Cheeked Warbler, a shared endangered species, breeding in Texas and wintering in Guatemala. The participants were also very interested in establishing a "sister protected areas" relationship between the "Sierra de las Minas National Park" in Guatemala and the "Balcones-Canyonlands National Wildlife Refuge" in the U.S. The two countries have agreed to assist each other in the development of their respective "habitat restoration plans" over the next several years, in addition to seeking opportunities to conduct joint studies of this species (Jun-Jul 04).

Inventory in Alta Verapaz Department: At the request of USAID/Guatemala, DOI contracted with the Wildlife Conservation Society (WCS) to continue an on-going biological inventorying and monitoring project in the Chisec area, located in the Alta Verapaz Department, just south of the El Peten Department. WCS completed its work in December and drafted its results in the report entitled, "Description and Critical Assessment of Habitat and Connectivity in Municipio Chisec, Evaluating Long-term Viability for Maintaining Populations of Jaguar" (December 2002).

Planning and Design

Public Use Plan: A team consisting of a DOI landscape architect and a DOI mechanical engineer completed a Public Use Plan for the Semuc Champey Natural Monument, located in Alta Verapaz. The team conducted a wide evaluation of the carrying capacity, existing infrastructure designs, in addition, to numerous interviews, field visits, etc. to best recommend how this site, fragile and of growing popularity, can best be developed sustainably. The team worked with INGUAT(the Guatemalan Tourism Ministry) the local town leaders, CONAP

(the Guatemalan National Parks Service), and a U.S. Peace Corps Volunteer assigned to this site, to draft the Public Use Plan. The Plan recommended a much lower carrying capacity than previously proposed and detailed recommendations for visitor services, including low-impact trails and low-tech solid waste disposal, ideal for this remote location. Through the continued contact with the Peace Corps Volunteer, many of these recommendations are in the process of being implemented (April 2004).

Follow-up Design Revisions and Finalization: DOI provided on-site assistance to finalize construction designs for park staff housing and ranger stations at the Sierra del Lancandon National Park. DOI expertise was particularly significant in designing low-tech systems for potable water, wastewater management, solid waste disposal, and energy needs in these remote locations, using locally-available materials. The park is currently in the process of constructing and/or rehabilitating the structures designed and specified by the DOI and Guatemalan team (May 2002).

Design of Park Ranger Station and Park Staff Housing: A DOI architect and a DOI engineer worked with Guatemalan architects to plan for and draw designs and specifications for park staff housing and ranger stations at Sierra del Lancandon National Park. The DOI staff continued assisting their Guatemalan counterparts after the trip, providing much technical information, calculations, and further revisions to drawings and specifications (May 2001).

General Protected Area Management

New U.S.-Guatemala Sister Parks Established: Four high -level Guatemalan park officials, including the Director of CONAP (Guatemalan Park Service), completed a 3-day study tour at the Big Cypress National Preserve. During the visit, major park management strategies and challenges were exchanged. On the final day, a ceremony was held for the signing of the new “Sister Park Understanding” between Big Cypress NP and Guatemala’s Laguna del Tigre National Park (September 2004).

Natural, Cultural and Social Resources: A DOI expert participated in a meeting held in New Mexico to determine how best to manage the natural, cultural, and social resources in and around the El Peru/Waka Mayan archaeological site, located within the Laguna del Tigre National Park in Guatemala. Representatives from various Guatemalan government agencies, U.S. universities, local communities, and non-governmental organizations gathered at this meeting to develop a long-term multidisciplinary partnership and an action strategy to move forward with “one voice”. The meeting identified DOI as an obvious technical partner for assisting with the site’s development for sustainable tourism, including management planning, infrastructure and interpretation (December 2003)

Cave Management: A DOI cave expert provided technical assistance for low-impact and community-based management of a series of caverns in Guatemala's Alta Verapaz region. DOI provided specific recommendations on how tourists should be managed through each cave, interpretation strategies, and health and safety issues. Immediate results include the trail improvement that the community undertook during this trip following DOI’s exact specifications. This DOI visit coincided with Guatemala's "First International Symposium on Cave Tourism," where experts were brought in from Italy, Costa Rica, and the U.S. to work with Guatemala's growing geology and cave experts. At the Guatemalan government's

request, the DOI cave expert made a presentation on DOI's "Leave No Trace" program (July 2003).

Critical Habitat Assessment: A DOI resource manager provided technical assistance to the Punta de Manabique National Park, a marine park along the Gulf Coast of Guatemala. DOI collaborated with a local non-governmental organization, Fundaparque, successfully mapping key areas of the park that composes critical habitat for the Saltwater Crocodile, an endangered species with very limited range worldwide. DOI also provided Fundaparque recommendations on activities that would improve the survival of this species through the protection of this vulnerable habitat (August 2003).

Park Management Study Tour to U.S.: Nine high- and mid-level Guatemalan park officials completed a study tour of four DOI sites within the U.S. As a result of this study tour, the Mayan Biosphere Reserve is currently in the process of establishing a sister park relationship with Big Cypress National Park (September 2001).

Evaluation of Laguna del Tigre Park Status: DOI assisted a team of USAID/Guatemala staff in assessing whether USAID/Guatemala should continue funding the management of the Laguna del Tigre National Park and, if so, how to do so most effectively. The team recommended that assistance to the park continue, and USAID/Guatemala has continued to provide assistance to the new team of park staff (June 2001).

Long-term Park Management Training to Guatemalan Park Officials: Two CONAP (Guatemalan Park Service) officials from the Mayan Biosphere Reserve completed a 2-month training program for protected area managers entitled Wildland Management in the Tropics. The training was held in Costa Rica and focused on hands-on, practical field training (June 2001).

Policy

Policy Advice to Guatemala's New Ministry of the Environment and Natural Resources: DOI helped the Government of Guatemala map out the roles and responsibilities of the various agencies that deal with the environment and natural resources in Guatemala, including the newly established Ministry of the Environment and Natural Resources (March 2001).

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

As indicated above, due to the recent consolidation of USAID functions worldwide, the USAID/Guatemala office is scheduled to close on September 30, 2004, with future Guatemala assistance to be provided by the USAID Central American Regional office (USAID/G-CAP). As such, all DOI activities conducted for USAID/Guatemala will be completed by September 30, 2004.

ADDITIONAL INFORMATION

Reports describing the results of DOI technical assistance in Guatemala are available upon request.

INDONESIA - Mine Policy

SUMMARY OF ASSISTANCE

The Department of the Interior's Office of Surface Mining (OSM) is providing technical assistance to the Indonesian Ministry of Energy and Mineral Resources to support the decentralization process and to build capacity in local governments to manage mineral resource programs at the local level.

In order to support the efforts of The Indonesian Ministry of Energy and Mineral Resources to decentralize and to build capacity among Kanwil and Provincial Government Mine Inspectors, the Department of the Interior's Office of Surface Mining (OSM) is providing an intern program and advanced inspector training to appropriate Indonesian professionals.

FUNDING

\$800,000 from USAID/Indonesia in FY '04

\$950,000 from USAID/Indonesia in FY '03
\$290,000 from USAID/Indonesia in FY '02
\$250,000 from USAID/Indonesia in FY '02
\$100,000 from USAID/Indonesia in FY '02
\$1,000,000 from USAID/Indonesia in FY '01
\$500,000 from USAID/Indonesia in FY '00
\$225,000 from EAPEI in FY '00
\$120,000 from EAPEI (reprogrammed) in FY '00

RECENT RESULTS

Growing the Project

DOI continues to expand its Indonesian Government Constituency through contacts developed during training classes and USAID requests. The project has begun technical support to the Ministry of Forestry and the National Planning Agency (BAPENAS), Provincial Governments of South Sumatra and North Sulawesi, county governments of Muara Enim, South Sumatra and Sawahlunto, West Sumatra. During this expansion, technical assistance continued with existing constituencies within the Ministry of Energy and Mineral Resources (ESDM) and the Ministry of Environment (MLH) and the Provincial Government of East Kalimantan and county governments of East Kutai and Kutai Kertanegara.

The increase in the number of requests for assistance from a variety of Indonesian government units required the project office to seek a position for a second American. That request was approved and funded by USAID in Jakarta. Tom Gillis from the State of Colorado Division of Geology and Minerals (ESDM) joined the project office in Jakarta on September 27, 2003. His work focuses on curriculum and training development in collaboration with ESDM's Center for Minerals and Geology and the Center for Mining and Mineral Development in Bandung.

Developing or Improving Linkages

DOI has been helping relevant Indonesian agencies develop more rational positions on mining and the environment and then better defend those positions when overlapping interests collide.

ESDM and Ministry of the Environment (MLH)

- ESDM and MLH have many overlapping interests but rarely have the opportunity to discuss these interests at the working level. Following the decentralization of mineral management to local governments, DOI began initiating joint training and field exercises for staff of the two Ministries. Most MLH people have never visited mines nor have a mining-related degree, so they have required some basic training on mining and minerals management.
- MLH requested assistance from OSM in developing water quality standards for the coal mining industry. The project collaborated with a team from MLH on new effluent standards for coal mining operations. Discussions included an explanation of the U.S. industry-specific standards and why those parameters and numbers were selected. Ministerial Decree, KepMLH/113/2003 on coal mining effluent limits, was signed and implemented in July 2003. The decree sets standards for discharges from both mining areas and preparation plants. The standards are similar to those adopted in the U.S. for pH, Iron and Manganese but are higher for Total Suspended Solids. As these new standards are enforced the water quality leaving coal mine sites will be greatly improved.
- Following this decree, MLH requested additional assistance in developing water quality standards for metal mining. Project staff has been part of a working group developing water quality standards for the copper and gold industries. These new standards are scheduled to be promulgated in a Ministerial Decree in July 2004.
- *The AMDAL is Indonesia's version of the EIS in the U.S. The process is very similar to the EIS process but AMDAL documents generally lack detail and are not as useful as they should be in the decision making process. The project has worked with a team from the Ministry of Environment and the Ministry of Energy and Minerals Resources to develop a training course for the Review of AMDALS for Mining Operations. This course was team taught as a pilot course last year and revised. The entire course with lesson plans and student handouts was translated into Bahasa, Indonesia and delivered to units within both Ministries. In August, the class was sponsored by the project but with all Indonesian instructors from both Ministries teaching the class to 28 students in Padang, West Sumatra. Two OSM instructors participated but only provided support to the primary instructor team. The class was well received and is now part of the class repertoire of two Ministries. There have already been additional requests for the class to be presented again.*

Forestry (MOF) and ESDM

- There has recently been conflict between the two Ministries over mining in protection forests. ESDM issued mining concessions to 152 companies to explore and exploit minerals in areas that were later declared protection forests by MOF. The two Ministries were unable to resolve the issue so the Indonesian Parliament (DPR) is now involved. The sentiment in the

DPR seems to be to issue permits for exploitation to companies who have discovered deposits thus honoring original commitments. At the request of USAID, the Project provided MOF basic mining information they could use in meetings with the DPR and ESDM. MOF was given additional working papers on the impacts of mining on watersheds, water quality, and water quantity. These are the very values protection forests were set aside to protect.

- Protected forests do not share the same absolute prohibitions against mining as conservation forests and parks but access is expected to be limited because of their important role in protecting watersheds and valuable habitats. Cooperation continues with the Ministry of Forestry on developing criteria it can use for mines approved to operate in protected forests. The project will provide training in the basics of mining, its impacts and mitigation and reclamation.
- *A 3-day short course was developed for Ministry of Forestry staff assigned with managing mining activities on protection forests. The day before the class was to open, the Ministry of Forestry postponed the class because of complaints from NGOs about making any concessions related to mining in protection forests. NGOs were in the process of filing a lawsuit in hopes of overturning the Presidential Decree authorizing 13 companies to continue mining activities in protection forests. They were concerned that if Ministry of Forestry staff attended this class it would weaken their anti-mining position.*

Training and Capacity Building

- DOI training in Indonesia has provided opportunities for participants from MLH and ESDM to discuss the issues that overlap in their respective jurisdictions. Co-Instructors were drawn from both MLH and ESDM to give both agency positions equal expertise and weight. Many “myths and urban legends” were debunked by free discussion and the help of a full set of both MLH and ESDM Regulations.
- A training session was held September/October 2003 in East Kalimantan and South Sumatra for Provincial and county Ministry of Environment, mining agencies and industry.
- Training for Trainers was held in March 2004 to meet a special request from ESDM BADIKLAT to improve the capacity of new hires in the two Bandung centers.
- Training in the U.S. is part of the recipe for initiating change in Indonesia. By providing good examples of current mining practices outside Indonesia, Indonesian regulators gain some confidence when proposing new requirements. Indonesian regulators are constantly battered by industry threats to abandon mining activities if new requirements or standards are implemented and they are labeled as anti-development. The regulators need first-hand experience to enhance their ability to make changes or counter industry claims.
- Seven participants from central, provincial county and city offices of MLH, and ESDM Training Centers in Bandung and county and city government traveled to the U.S. to meet with OSM, EPA, State Regulatory Agencies and NGOs about regulating mining in the U.S. During the visit the participants visited a number of active mines, both coal and metal and pre-law abandoned mines and superfund sites in July, 2003. This mixed group sparked lively

discussion which has continued after their return to Indonesia. Some visible cooperation has developed as a result of this trip, especially in Muara Enim.

- Conducted a 3 day session of “Training for Trainers” (Dr. Leslie Wildesen, ETCI, Inc.) for 24 instructors from the Center for Geology and the Center for Mineral and Coal Technology (Two training centers under the Agency for Education and Training in the Ministry of Energy and Mineral Resources)
- Meetings conducted with Mining and Environmental Agencies in Kabupaten (county) Muara Enim, S. Sumatra to discuss a draft local regulation on coal mine reclamation. A short course on Principles of Mine Reclamation was presented in May to assist the Agencies and local mining industry in reaching a reasonable and workable decision on the draft regulation language.
- Provided ideas and materials on a reclamation awards program for Subdivision on Environment under the Director General of General Mining (this is the mine inspector division). The agency plans plan to create a new award programs for high quality reclamation and were looking for ideas and ways to evaluate and select good award candidates.
- The Protect Director held a 2-day workshop on Principles of Revegetation and Reclamation with a field trip in Tanjung Enim, South Sumatra. This training was requested by the local government and the mining company to help them determine how to reclaim portions of the mine site and to determine what kind of reclamation was possible at the site. There has been little or no contemporaneous reclamation so many of the options that were available before mining began are not possible now.
- The Project Director was invited to be a guest lecturer to present a class on use of computers in Mine Permit Review.
- Meetings were arranged between Ministry of Environment, Bapedalda (Environment Agency) East Kalimantan, Samarinda City and Kabupaten (county) Kutai Kartanegara on revisions to local decrees to become consistent with last year’s Decree of the State Minister of the Living Environment Number 113 on Effluent Standards for Coal Mine Discharges. It now seems possible for local governments to issue water discharge permits under the new decree which will provide authority for periodic inspections. Heretofore, no environmental inspections of mining operations were made by Ministry of Environment people. This will be a big achievement when finalized.
- ***The project provided two experts on Acid Mine Drainage to present papers titled Estimating Mine Water Composition from Acid Base Accounting and Weathering Tests; Applications from U. S. Coal Mines by Eric F. Perry and Geologic and Hydrogeologic Observations Useful in Predicting Mine Water Quality by Keith B.C. Brady at an International Symposium on AMD in Bandung. Another part of this Symposium was a 2-day short course on Acid Mine Drainage and the two experts taught 1-day of that short course.***

Strategic Planning and Capacity Building in the ESDM Training Agency (BADIKLAT)

Along with decentralization came a choice to attend training. BADIKLAT asked DOI for help developing specific lesson plans to fulfill training requests from local governments resulting from the needs survey DOI distributed last year. The Ministry's six-month mine inspector course is being reviewed and revised with project assistance. The course for AMDAL reviewers is complete and delivered to BADIKLAT. An AMDAL preparer's course is being developed with project assistance to improve the quality of submitted AMDAL documents in the mining sector. Other requests include Calculating Reclamation Guarantees, Groundwater Hydrology, Acid Mine Drainage Prediction and Prevention, and Sand Mining. The project is planning to provide additional training for trainers for Ministry Instructors to improve the quality of the agency trainers.

Technical Assistance to Local Governments

DOI is frequently asked for advice and assistance by local governments on a variety of mining issues. Most are very short-term requests or involve supplying copies of publications from the Project library but some are more substantive and are worth reporting.

DOI was asked by BAPEDALDA Kutai Kertanegara for help reviewing an AMDAL for a coal mine expansion in East Kalimantan. Project staff attended meetings, reviewed the AMDAL document, and prepared a report for the Kepala BAPEDALDA to submit to the company requesting revisions.

The Project was asked for help by the city government of Sawah Lunto, West Sumatra in determining reclamation options for the large government coal mine scheduled to close at year end. In July 2003, the adjacent river flooded the pit leaving a lake 1500m x 800m x 120m. Project Director and staff met with the mayor, his staff, and company officials to discuss reclamation choices that would provide long-term stability and good water quality.

A third request for assistance came from the county government of Muara Enim, South Sumatra. The government coal mine has been having AMD problems from one mine pit and recently experienced a large landslide in the waste disposal area that destroyed a major electricity transmission tower. DOI was asked for help in determining reclamation options for the waste area to improve land stability and for training on AMD prevention and treatment. The project office is assisting with a local decree to make changes in the post mining land use and will present a workshop on reclamation of disturbed lands in May 2004.

Following the Bandung Symposium, the AMD instructors traveled to Maura Enim in South Sumatra to teach a 1- week course on AMD Prediction, Prevention and Treatment for the local county government and the National Coal Mining Company, PT Bukit Asam, where there have been acid problems from their coal mines. The class included lectures and practical field exercises designed to help the company and the local government understand the causes of AMD and help them solve problems at those specific mines.

Technical Assistance to Small Scale Miners

- North Sulawesi, like other gold producing provinces in Indonesia, has a large number of small scale miners working shallow gold deposits and processing the gold using mercury. The

mercury lost to the environment is in tons per year and there is general interest in finding an acceptable processing alternative. The project director visited North Sulawesi several times to consult with local government, NGO's and the miners. A recommendation was made to convert to cyanide vat leaching which is much more efficient in recovering gold and is far more environmentally friendly. This recommendation was taken and there are now 38 vat leach operations recovering five times the gold over gold recovered from mercury amalgamation. The provincial Bapedalda (Environmental Agency) is very pleased with the rate of conversion and is encouraging more to follow suit.

- The Project Director served as team member to develop a Decree for effluent standards for gold and copper mining operations. Meetings were held in April and May with the new standards scheduled for release in August 2004. Consensus was reached at the final meeting for the standards and language of the Decree.
- Training and technical consultation for local government in Manado and Tatalu, North Sulawesi on processing alternatives for small scale gold miners using mercury (Dr. Harry Posey, CO, Division of Minerals and Geology and Mike Long, Shell Oil). Two 1-day workshops titled Mineral Recovery concerning the use of cyanide vat leaching to recover gold versus mercury amalgamation were held April 20-21, 2004. One day of on site consultation was provided for small scale gold processors to improve efficiencies of existing cyanide vat leach operations. A third workshop was held April 26-27, 2004 in Bandung, W. Java for the Center for Geology and the Center for Mineral and Coal Technology.
- An additional workshop was held in June 2004 on small scale gold mining in North Sulawesi. Emphasis was placed on the dangers of mercury and the advantages of process conversion from mercury amalgamation to cyanide leaching. A broad spectrum of local government officials, police and military were present. A field visit to Bolaang Mongondow, 4-hours from Manado, where there are over 3500 trommel units processing gold and losing an estimated 300 tons of mercury to the environment each year. This area will continue to receive attention from project management.
- *The project has been working with small- scale miners and the BAPEDALDA (EPA Equivalent) in Manado, North Sulawesi to reduce mercury by improving gold recovery practices using cyanide as an alternative to mercury amalgamation. A workshop was held in April 2004 to provide technical and practical process information to the local government and to the small-scale gold processors. A small-scale cyanide vat leach process had been suggested a year earlier and the April workshop provided practical assistance to the operators who adopted this change.*
- *In June 2004, a second workshop was presented in the same area where a much larger group of gold processors attended. Those who converted to the cyanide process, about 40, were looking for help in fine-tuning their process. Gold processors were reporting gold recovery rates up to five times greater from their new cyanide vat leach systems than with mercury which sparked a rush to change. Reports from nearby areas, Gorontalo and Bolaang Mongondow, showed the vat leach technology was spreading quickly and a site visit to Bolaang Mongondow was arranged. Cyanide vats were being constructed at the two*

sites we visited and reports from the head of the mining agency indicated there were about 13 new or under construction cyanide vats in use.

- *This vat leach technology is similar to the gold recovery process used by major gold mining companies around the world. The project just scaled it down to fit the small-scale production. Cyanide has its detractors since it is toxic and can easily damage aquatic life and kill people if improperly handled. The trade off seemed worth the risk and now there are over 60 vats producing gold. Each processor who converts to cyanide takes 1 liter of mercury/month out of the amount polluting the Manado area.*

Coal Fire Management

Coal Fire Management continues to be an important topic in Indonesia. There are still 164 coal fires burning in East Kalimantan. Coal fire training in early 2003 was given to 26 participants in South Sumatra. Three coal fires were extinguished this period by the county mining agency, in Muara Enim, South Sumatra using their budget. Informal coal fire training was continued during with geology instructors from MEMR Pusat Geology and staff from the city government of Balikpapan. Although coal fire project funds are exhausted, there continue to be requests for technical assistance and informal training.

An inventory of coal fires was conducted in a forest concession area adjacent to Sungai Wain Nature Preserve where 76 coal fires were extinguished during ITAP's Coal Fire Project. Eleven new coal fires were located in this area. Additional coal fires have been reported in South Sumatra bringing the inventory of active coal fires to 180. The project continues to monitor the coal fire situation and provides technical support to local government agencies conducting inventories and suppression projects.

Success Story

Following the regional inspector training, the county administrator swore in his mine inspectors and provided them with new uniforms. They then began conducting their own independent mine inspections.

SIGNIFICANT PROBLEMS OR DELAYS

Tom Gillis, the second American advisor on the project, had to leave Indonesia for medical reasons.

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

The project will sponsor a trip in October/November 2004 to the U.S. for six people from the Ministry of Environment who are tasked with preparing performance standards for mining operations and three from the Ministry of Energy and Mineral Resources Training Agency. The group will meet with OSM, EPA, State Regulatory Agencies and NGOs about regulating mining in the U.S. During the visit the participants will visit a number of active mines, both coal and metal and pre-law abandoned mines and superfund sites.

ADDITIONAL INFORMATION

Program descriptions, activity reports, assessments and press coverage are available upon request.

JAMAICA

SUMMARY OF ASSISTANCE

The Mines and Geology Division, Ministry of Land and Environment is the government agency with the responsibility for understanding Jamaica's geological resources and directing the orderly development of the country's mineral industry, ensuring that activities proceed in accordance with mining legislation and in harmony with the environment. The Mines and Geology Division functions to license, monitor and regulate all mining and quarrying activities on the island and to carry out investigations and mapping of the country's geological resources.

The Mines and Geology Division relationship with DOI/ITAP was initiated with a request for assistance with training of mining inspectors.

FUNDING

Reimbursement for travel and per-diem for two DOI specialists provided by USAID/Jamaica in FY '04.

RESULTS TO DATE

High-Level Meeting between Jamaican and U.S. mining agencies. DOI ITAP met with Mr. Larry Neufville, Chief of the Mining Inspectorate of Jamaica's Ministry of Land & Environment and the Office of Surface Mining (OSM) Director Jeff Jarrett in Washington, DC. This meeting was held as a follow-up to the technical training OSM had provided to the Jamaican Ministry back in November 2003. Also present at the meeting were several of Director Jarrett's top policy and technical staff, who led a lively discussion on quarrying practices in Jamaica versus the United States. Director Jarrett was gracious in his willingness to share and continue sharing the expertise and experience of his well-qualified staff (December 2003).

An OSM representative and a Pennsylvania State representative provided a 1-week training course, from November 17 – 21, 2004, to 20 Jamaican government personnel in proper use, handling and transportation of explosives and vibration monitoring and analysis, along with strategies to ameliorate various environmental issues relating to quarrying. In attendance were personnel from the Mines and Geology Division of the Ministry of Land and Environment, the National Works Agency, the National Environmental and Planning Agency, and the Jamaica Defense Force. Additionally one participant was from Tobago.

The training was rooted in the OSM Blasting and Inspection class with supplemental information provided on environmental issues based on our observations during the field trip.

Quarry Safety: The Quarry Safety portion of the class was focused on blasting related issues on mining but also was related to blasting practices in the construction industry. The adverse effects of blasting in terms of ground vibrations, airblast and flyrock can now be evaluated by the students in a general sense.

Sedimentation of Stream Channels: Based on field observations of current mining practices at a gypsum mine, a significant amount of erosion from unprotected slopes and subsequent sedimentation of stream channels is occurring near residential areas. In one instance, sedimentation filled the stream channel and caused flooding of the adjacent homes. The erosion is largely coming from mined areas where the slopes are unprotected and waste material is carelessly cast over the hill side. All the mines observed near Kingston are along the coast and sedimentation can easily reach the sea. Offshore impacts could not be observed during this visit.

Environmental Best Practices: During the Environmental Best Practices portion of the class, waste/refuse disposal was discussed as a means of minimizing sedimentation, storm water management as a means of minimizing flooding and revegetation of slopes to minimize erosion. Strategic placement of waste disposal areas and impoundments would result in a significant reduction of down stream and offshore sedimentation. By designing disposal areas, much of the storm water runoff and sedimentation can be contained on-site. Another observation is that better road construction and planning could help reduce erosion and storm water runoff.

Visual Impact: A strong interest was also expressed in reducing the visibility of the quarry activities to the public and tourists. Unfortunately the types of quarries currently operated in Jamaica are difficult to hide because they are excavating a hill side as opposed to excavating a pit. However a positive note to local planning is that the limestone quarries have been limited to only one watershed. This certainly helps minimize the aerial extent of visual impact.

Course Evaluations: All the participants were very engaged during the 5- day class. They particularly liked the practical approach of instruction. The course evaluations reflected strong interest in the subject matter. Many felt that the class was essential in performing their jobs and some expressed a desire for additional training on blasting. Others found the environmental components helpful and want more training on waste/refuse disposal, sedimentation/erosion control and mine/quarry plan preparation, appraisal and evaluation.

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

DOI/TAP submitted a proposal to USAID/Jamaica for follow-on activities. We are awaiting feedback.

ADDITIONAL INFORMATION

A report is available upon request.

JORDAN

SUMMARY OF ASSISTANCE

Petra, the ancient capital of the Nabataeans, was inscribed on the World Heritage List in 1985. Petra is an archaeologically fascinating site, world famous for its magnificent building facades carved into beautiful stone canyon walls.

Inhabited since Neolithic times, Petra entered its golden age when the Nabataeans chose this site to be the royal seat of king Aretas in the second century BC. From that time onwards, for several centuries, Petra played a dominant role, flourishing as an economic and religious center and as a sacred funerary city. Petra was once a major crossroads for the caravan routes that led to Sinai, the Red Sea, the Dead Sea, Egypt and Syria.

The integrity and conservation of the site are threatened by an increased flow of tourists to the site and the sideline activities this tourism engenders. The U.S. Department of the Interior is providing technical assistance to improve the management of the site.

FUNDING

To be determined

RESULTS TO DATE

The U.S. Department of the Interior and The Kingdom of Jordan have signed a MOU to facilitate technical support and training to improve the skills, institutional and organizational structure of the Petra Management Unit, and to enhance site management and protect the resources at Petra Archaeological Park and other protected sites in Jordan (January 2003).

SIGNIFICANT PROBLEMS OR DELAYS

The provision of DOI technical assistance has been postponed until the security situation improves.

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

None

NILE BASIN

SUMMARY OF ASSISTANCE

The Nile Equatorial Lakes sub-basin is a region whose water resources include one of the world's great complexes of lakes, wetlands, and rivers. Relationships among various countries have been strained for decades (often over Nile River water-sharing issues). Nearly all the riparian states suffer from domestic conflict and regime instability. The water resources of this region are central to the sustenance of unique natural ecosystems, and to the support of its people, and there is great potential for these resources to underpin strong economic growth in the region.

The 10 states that share the waters of the Nile Basin have created an organization in Entebbe, Uganda, to coordinate their efforts, called the Nile Basin Initiative. They are also establishing sub-basin coordinating bodies and project implementation offices. The staffs of these institutions require training in diverse disciplines and familiarization with the work of similar bodies elsewhere in the world. To that end, DOI hosted a study tour to various national and international institutions in the U.S. for Nile Basin Initiative staff and members.

FUNDING

\$200,000 from State Department, Oceans, Environment and Science Initiative in FY 03

RESULTS TO DATE

Twelve members of the Nile Basin Initiative Equatorial Lakes Subsidary Action Programme (NELSAP) participated in a 2-week water resource management study tour of the U.S. The study tour began in the Washington, DC area before moving west to follow the Columbia River from the Grand Coulee Dam to one of the River's tributaries near Corvallis, OR. Two themes were addressed, in the context of water resource management: institution building, and developing interdisciplinary awareness and coordination. Through seminars and site visits, the study tour group learned how a variety of water resource management and associated organizations operate on a daily basis, including:

- International: the International Boundary and Water Commission, the International Joint Commission, and the World Bank
- Federal: the U.S. Bureau of Reclamation, the Army Corps of Engineers, the U.S. Fish and Wildlife Service, the National Invasive Species Council, the Bureau of Indian Affairs
- Federal/Private: Bonneville Power Administration
- State and Local: Potomac River Basin Commission, OR watershed units
- University Researchers: Oregon State University

During these meetings, study tour participants analyzed case studies of water resource management issues for several transboundary rivers in the U.S. Then the group participated in an in-depth study of the various components of water resource management along the Columbia River, including: river and dam operations, hydropower, flood control, fisheries, indigenous rights, recreation, agriculture/irrigation, aquatic invasive species, international benefits sharing, and transboundary management.

Significant Problems or Delays

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

DOI will prepare a report on the study tour and consult with the State Department, Nile Basin Initiative, and the World Bank Nile team to identify potential follow-up activities.

ADDITIONAL INFORMATION

Reports describing the results of DOI technical assistance in the Nile Basin will be available upon request.

PERU

SUMMARY OF ASSISTANCE

Peru contains 73 million hectares of forest, making it second only to Brazil in the amount of forested land in Latin America. Historically, Peru's management of its forests has been plagued by illegal and poorly controlled timber cutting, inefficient harvest practices that waste forest resources, widespread poverty that fosters slash and burn agriculture and other unsustainable land uses, land clearing for coca production, and a harvest economy that provides few benefits to local loggers or communities or value-added revenues to Peru. During the past 40-years Peru has lost more than 9.5 million hectares of forest while the revenue generated from forest exploitation remained well below the average for nations in Latin America.

In April 2001 Peru approved the Forestry and Wildlife Law No. 27308 that established 24.5 million hectares of permanent production forests (about 34 percent of all forestlands in Peru). The permanent production forests are to be managed for the sustainable production of timber and other forest products. By international standards the law is progressive and Peru's Ministry of Agriculture, primarily through its Instituto Nacional de Recursos Naturales (INRENA), is making a serious attempt to implement it.

DOI is providing technical assistance to USAID/Peru to support INRENA. DOI is providing technical assistance in two broad areas: protected area management and forestry.

FUNDING

\$50,000 from USAID/Peru in FY '02

\$50,000 from USAID/Peru in FY '03

RESULTS TO DATE

A multi-disciplinary team of DOI and USFS (an expert in each: economic natural resource cost-benefits analyses, natural resource law enforcement, and general park and forestry management) provided technical assistance at the headquarters level of the Peru's Instituto Nacional de Recursos Naturales (INRENA). The team developed a CY 2004 workplan and recommendations for technical assistance through CY 2006, that would work primarily to reduce the incidence of illegal logging and wildlife extraction in Peru's protected areas (November/December 2003).

A DOI team traveled to Peru to assess the current state of INRENA management activities as well as the economic and socio-cultural impediments to managing animal and plant communities in Peru's protected areas. This information was used to compile a 4-year technical assistance plan considering the scope of land use and resource issues in terms of what DOI and its' partners could provide to Peru (November 2002).

DOI sent one participant from Peru to the 5th annual Wildlands Management in the Tropics course in Costa Rica (October/November 2003).

SIGNIFICANT PROBLEMS OR DELAYS

Reorganization at INRENA has hampered progress on implementation.

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

ITAP will revise its workplan based on feedback from USAID/Peru.

ADDITIONAL INFORMATION

An assessment report is available upon request.

PHILIPPINES

SUMMARY OF ASSISTANCE

DOI is embarking on a new program of technical assistance in the Philippines focused on increasing capacity of local and national environmental law enforcement bodies. The program objective contributes to the mission of USAID/Philippines to strengthen the ability of national and local government units and communities to address critical threats to the country's coastal resources and promoting good governance – transparency and accountability – in enforcing environmental laws. This work builds on previous law enforcement training conducted by DOI in the Philippines.

FUNDING

\$75,000 from USAID/Philippines in FY04
\$46,250 from EAPEI in FY '99

RESULTS TO DATE

Marine Law Enforcement

Marine Law Enforcement Assessment: A DOI team completed a needs assessment and curriculum design assignment in the Philippines, to prepare for skills training in marine law enforcement for Philippine governmental agencies and non governmental organizations with jurisdiction and responsibility in protecting the marine environment (December 1999).

Training: A DOI team of two marine law enforcement specialists conducted a 2-week training in basic marine boating and law enforcement skills in Batangas Province, Philippines. The training included participants from local “Bantay Dagats,” or local marine patrols, and NGO representatives who have responsibilities in marine law enforcement in the Philippines near shore waters and marine protected areas. In addition to the DOI experts, experts from several Philippine government agencies and NGOs taught sessions of the training. The sessions included training in basic patrol and arrest techniques, fish identification, local marine law, interagency coordination and basic boating and safety (February/March 2000).

Success Story

The World Wildlife Fund in the Philippines reported that the local Bantay Dagat (sea watch patrol teams), were very pleased with the DOI training in 2000:

“The training has greatly helped in improving the capacities of the local Bantay Dagat ... They spoke highly of the hands-on training (activities) such as those on board and search, charting and navigation, and apprehension. One key highlight of the Bantay Dagat operations in Mabini and Tingloy... is that there are no more commercial vessels encroaching in the municipal waters of Mabini and Tingloy. As a result, the municipal fishermen are able to catch more fish (both in terms of quantity and species of fish) and ... do not need to fish too far.”

DOI conducted a follow-up law enforcement training in February 2004. The trainees were drawn from several local and national jurisdictions and the training focused on marine law enforcement.

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

DOI is recruiting personnel to conduct a needs assessment in the Philippines.

ADDITIONAL INFORMATION

More detailed reports describing the results of DOI technical assistance in the Philippines are available upon request.

TANZANIA

SUMMARY OF ASSISTANCE

Since 1997, DOI has provided technical assistance to the Tanzania National Parks Authority (TANAPA) to improve management in the Tarangire-Lake Manyara Complex (Tarangire and Lake Manyara National Parks and adjacent lands).

DOI's work is targeted at the management of the two national parks in the Complex – Tarangire National Park and Lake Manyara National Park. Tarangire National Park, at 260,000 hectares, is the fourth largest park in Tanzania with one of the highest densities of elephants of any park in the country. Lake Manyara National Park is an international Biosphere Reserve. Its 32 hectares consist of distinctive vegetation zones, extensive marshland along the rift valley walls and parklands, scattered with acacia trees. It hosts tree-climbing lions, greater Flamingo, and Pelicans.

The DOI technical assistance in these two parks has focused on critical field operations, including wildlife anti-poaching, roads, fire, park infrastructure, and general protected area management.

FUNDING

\$50,000 from USAID/Tanzania in FY '04
\$125,000 from USAID/Tanzania in FY '03
\$175,000 from USAID/Tanzania in FY '01
No new funding from USAID/Tanzania in FY '99 or FY '00
\$500,000 from USAID/Tanzania in FY '98
\$400,000 from USAID/Tanzania in FY '97

RESULTS TO DATE

Marine Protected Areas Management

Resource Management:

DOI completed a 1-week evaluation of the marine resources at select Marine Protected Areas (MPAs) near Dar Es Salaam during the month of June 2003. Based on needs and interest expressed, DOI recommends that the Tanzanian government adopt an embedment anchor buoy system technology to install replacement demarcation buoys at Mafia Island while conducting an on-the-job training for various Marine Protected Area staff. Another major recommendation is that the government increases its efforts to eliminate drag net fishing that is very destructive to coral reefs (June 2003).

Law Enforcement:

LE Training of Local Community Scouts and Patrol Boat Delivery:

A team of four DOI law enforcement agents trained a team of Bagamoyo district-level coastal scouts on basic marine law enforcement techniques and small-boat operation,

maintenance and safety. In conjunction with the training, ITAP purchased and handed over a 14-foot fiberglass patrol boat, motor, and boat accessories to the district, which will be using them for near-shore law enforcement patrolling and response in the surrounding marine protected areas. The District Commissioner of Bagamoyo and Member of Parliament for Bagamoyo were highly impressed with the results of the training course and the DOI trainers. The Acting Ambassador and the USAID Mission Director presided over the boat transfer and graduation ceremony and were very pleased with the results of the training. The graduation ceremony was also covered favorably by the Tanzanian press.

LE Training of Marine Protected Area Staff:

Three DOI staff completed a 2-week law enforcement training to multi-jurisdictional marine protected areas staff in Dar Es Salaam, Tanzania, the first of its kind. USAID/Tanzania and its partners indicated that this is the start of a long term protection program for Tanzania's Coastal Resources (June 2003).

Success Story

As part of the June 2003 marine law enforcement training, the DOI trainers and Tanzanian trainees conducted surprise inspections of three local seashell dealers and seized over 150 kilos of illegal sea coral and parts of five sea turtles. It was reported in the local news as the largest seizure of illegal marine products in Tanzania's history.

Anti-Poaching (Law Enforcement)

Ugalla Game Reserve Radio System:

A DOI radio expert conducted an extensive assessment at this Reserve to determine the best radio system to purchase and install. This will be the first such system to exist, allowing Ugalla staff to communicate with other government agencies, including TANAPA, for improved collaboration (February 2004).

Ugalla Game Reserve:

Thirty-five Tanzanian Wildlife Division game scouts were trained by five DOI law enforcement experts on anti-poaching techniques, case preparation, personal safety and emergency response, use of compasses and Global Positioning System devices, among other topics through a combination of class work and field exercises. This effort represents the first major training event provided strictly to the Wildlife Division, and it was completed at the Ugalla Game Reserve, a Wildlife Division managed protected area in the central region of the country (September/October 2002).

Tarangire and Lake Manyara National Parks:

DOI law enforcement experts have provided a series of law enforcement training sessions at Tarangire and Lake Manyara National Parks. The topics have included: investigation and arrest methods, land navigation using compass and GPS, incident report writing, and basic patrol design. DOI teams helped design standardized reporting forms for anti-poaching teams. Each successive training builds on the results and findings of the previous training (October 1998, February 1999, February 2000, March 2002).

Equipment:

DOI has delivered law-enforcement related equipment for rangers in Tarangire and Lake Manyara National Parks and Ugalla Game Reserve. The equipment has included camping gear, binoculars, compasses, maps, and GPS units. During repeat visits to the sites, the DOI teams assess the use and maintenance of the equipment.

Roads

Training

A DOI team worked with TANAPA road staff to complete the design and construction of a new access road and parking lot to newly constructed visitor centers at both Tarangire and Lake Manyara National Parks. The DOI team combined this task with on-the-job training for park staff, emphasizing the environmental impact component of these tasks. The DOI team also provided the park staff with inexpensive surveying equipment that was formerly unavailable, significantly improving their construction capabilities (June 2003).

A series of DOI teams have trained TANAPA staff on road construction and repair and the operation and maintenance of roads equipment. Skills trained include grading, crowning of roads, establishment of shoulders, sensitivity to water passage, and use of equipment in different soil types. Through field exercises critical sections of the roads in Tarangire National Park have been repaired (February/March 1998, June 2000, January 2001, February/March 2002).

Assessments of Road Conditions:

A DOI team performed an assessment of the road program in Serengeti National Park and provided recommendations for improvement of that program (February/March 2002).

A DOI roads engineer participated with a team of USAID contractors and specialists in drafting a programmatic environmental assessment of proposed roads projects in Tarangire and Lake Manyara National Parks. The DOI engineer worked intensively for one month with a team of experts, and at the beginning of March 2000, produced a draft project environmental assessment for review by USAID and the Tanzanian government (February 2000).

The road conditions at Tarangire National Park were comprehensively assessed in light of damage due to heavy rains (February/March 1998).

Fire

Fire Management Planning: A team of DOI fire management experts worked with TANAPA staff to produce a fire management plan for Tarangire National Park (October 1999, March 2002).

Success Story

A DOI fire management team worked with TANAPA management specialists to draft the first Fire Management Plan for Tarangire National Park. TANAPA has indicated to DOI that this plan has been incorporated into the General Management Plan for both Tarangire and Lake Manyara National Parks.

Training

Based on the DOI assessment of the capacity of Tarangire and Lake Manyara National Parks to suppress wildfires and manage fire in the Parks for ecological objectives, multi-bureau DOI fire management teams have conducted training for Tarangire and Lake Manyara staff in fire suppression skills. DOI contributed basic fire fighting tools to the parks, and the training incorporated both lecture and field exercise components, to build capacity in the parks both to fight wildfires and to manage controlled burns (January 1999, September 1999, March 2002).

Park Infrastructure

Signs: DOI provided Tarangire and Lake Manyara National Parks technical assistance on the design and development of park signage (October 2003).

Facility Design Assistance: A design for the Lake Manyara visitor center has been developed (July-August 1999).

Interpretation Workshop: A DOI team consisting of an architect, landscape architect, and interpretive specialist, worked with TANAPA in an AWF-sponsored workshop on designs for visitor services in Tarangire and Lake Manyara National Parks. The workshop focused on establishing criteria for approving design concepts for a new visitor center, signage in the parks, and other park infrastructure ideas needed to improve the “park experience” for visitors (July/August 1999).

Protected Area Management

Study Tour to Four DOI Sites: At the request of USAID Tanzania and with full funding from the Tanzanian government, DOI led three Tanzanian Park Superintendents and the Ecology Chief for the Tanzania government on a 2-week study tour to three U.S. national parks and one wildlife refuge: Lava Beds National Monument, Yellowstone National Park, and Sequoia-Kings Canyon National Park, and Tulelake National Wildlife Refuge. The Tanzanians learned about how the U.S. addresses a variety of challenges and overall visitor management.

Park Management: A group of Tanzanian resource managers, including the Chief Park Wardens of Tarangire and Lake Manyara National Parks, participated in a U.S. study tour designed to highlight management approaches in relevant ecosystems (October 1998).

Marine Protected Area Training: A multi-agency group of Tanzanians associated with Tanzanian marine protected areas participated in a study tour to the U.S., where they were trained on marine protected area management. The participants included officials from the newly formed Mafia Island marine reserve, the Bureau of Fisheries, and the University of Dar Es Salaam. Participants were introduced to a variety of marine protected area management issues and practices, including visitor services, conservation program management, budgeting, law enforcement and facilities management. Participants were encouraged to discuss links where practices in the U.S. could be adopted for Tanzanian programs (July/August 1999).

SIGNIFICANT PROBLEMS OR DELAYS

As a continuation of the on-going problems DOI has encountered with TanBoat, the in-country firm that built the patrol boat delivered, the DOI LE trainers determined that the boat was poorly built and structurally unsound. After multiple complaints from other TanBoat clients, the Tanzanian police confiscated the TanBoat property, shutting down the entire operation. As such, DOI will continue working with TCMP to ensure that the boat delivered is appropriately retrofitted for safe use and operation.

A patrol boat that DOI has purchased originally for delivery to Lake Manyara will now be delivered to the marine protected areas in the Bagamoyo District. Due to the high prices and logistical challenges encountered in trying to purchase certain equipment in country, DOI has determine that it will purchase the boat's motor in the U.S. and have it delivered to Tanzania prior to the training now scheduled for August 2004.

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

DOI will continue providing anti-poaching assistance, including purchase and delivery of a new radio system for Ugalla Game Reserve. DOI will also assist with the installation of the system in addition to providing training on its operation and maintenance.

ADDITIONAL INFORMATION

More detailed reports describing the results of DOI technical assistance in Tanzania are available upon request.

UGANDA

SUMMARY OF ASSISTANCE

Mgahinga and Bwindi National Parks, in southwestern Uganda, are home to the remaining 600 or so mountain gorillas left in the world. The mountain gorillas are the rarest of the three subspecies of gorillas. In addition to the gorillas, both parks have a surprising variety of animal and plant life and both offer some excellent hiking in spectacular scenery. Mgahinga is the smaller of the two parks but is also part of a much larger ecosystem, the Virunga Conservation Area which includes adjacent parklands in Rwanda and the Congo. Bwindi is about ten times the size of Mgahinga and is a dense, luxuriant forest covering wet rugged hills cut into steep ravines. Both parks are pockets of wilderness surrounded by densely populated farmlands. Most conservation problems are a result of conflicts over the use of resources -- the community and wildland interface. Seeing gorillas in the wild is the primary attraction that draws international tourists to these two parks.

DOI has been asked by African Wildlife Foundation (AWF) to provide selected technical assistance on their projects in Mgahinga and Bwindi National Parks.

FUNDING

AWF provides reimbursement of transportation and per diem costs for DOI technical assistance.

RESULTS TO DATE

A DOI representative worked with the staff of the International Gorilla Conservation Programme as well as the staff of Mgahinga Gorilla National Park (MGNP) to refine development concepts for a new visitor center and exhibits at MGNP; and help to facilitate an African Wildlife Foundation (AWF)-sponsored workshop on structures design and interpretation for Mgahinga Gorilla National Park (May 2003).

DOI fielded a team of fire management experts to train Mgahinga and Bwindi National Park staff in fire suppression techniques, and to help develop a basic fire management plan (October/November 2003).

SIGNIFICANT PROBLEMS OR DELAYS

None

MAJOR ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

ITAP has drafted a Memorandum of Agreement with Uganda Wildlife Authority (UWA) to provide additional technical assistance. It has received State Department approval. DOI is awaiting UWA's final approval and signature.

ADDITIONAL INFORMATION

Trip reports available upon request.

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