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# BIODIVERSITY CONSERVATION AND FORESTRY PROGRAMS

## **2012 REPORT**

FY 2011 Results and Funding

December 2012



# USAID'S BIODIVERSITY CONSERVATION AND FORESTRY PROGRAMS, 2012 REPORT

## Overview and Funding Summary

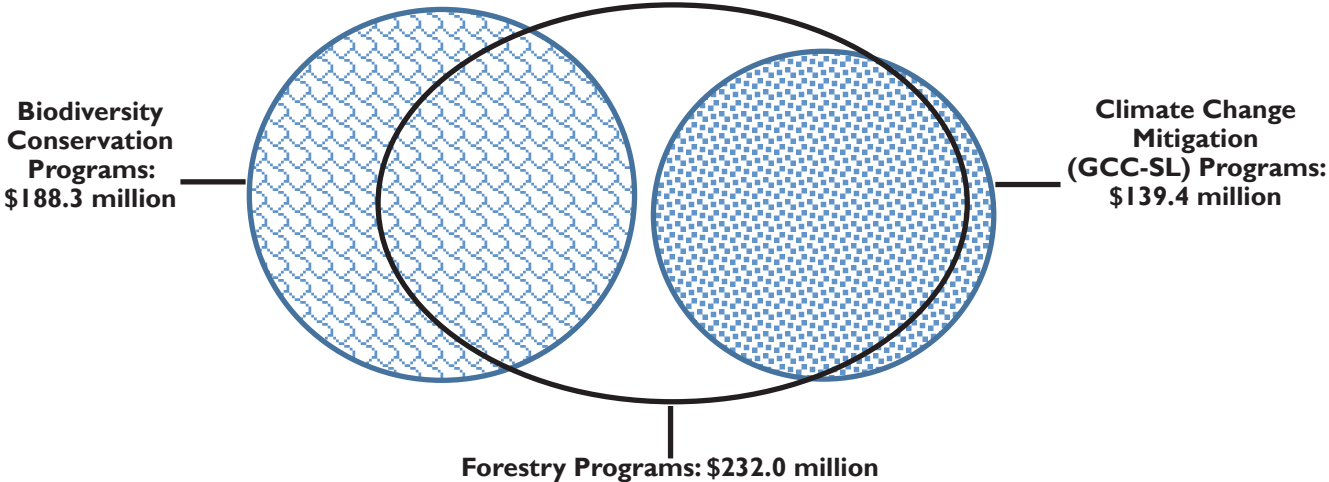
Section 118 of the Foreign Assistance Act focuses on the “continuing and accelerating alteration, destruction and loss of tropical forests in developing countries” and mandates that the United States Agency for International Development (USAID) take actions which support tropical forest conservation and sustainable management. USAID fulfills this responsibility primarily through programs that conserve forest biodiversity, maintain or increase carbon stocks in forests, or achieve both of these complementary objectives in strategic coordination, where appropriate. This report fulfills the requirement for an annual report on implementation of Section 118.

In FY 2011, USAID invested \$232 million in more than 40 countries in *forestry* – actions which conserve or better manage forests. Of this, \$225 million was focused on tropical forests. About \$134 million in forestry activities advanced climate change mitigation under the Sustainable Landscapes (GCC-SL) pillar of the Agency's Global Climate Change portfolio. Approximately \$88 million of USAID forestry efforts advanced biodiversity conservation as a key objective, while programs to restore or maintain forests for local services, such as freshwater supply and regulation, or reduced vulnerability to climate change risk factors and storm surge, accounted for about \$11 million of forestry activity funding. Figure 1 illustrates how forestry, climate change mitigation and biodiversity funding intersect. Table 1 summarizes USAID FY 2011 funding for biodiversity and forestry activities.

International biodiversity conservation accounted for approximately \$188 million in FY 2011 funding, with programs in more than 55 countries. Many activities worked to address the full range of threats in an ecologically-defined landscape, such as the Gorongosa Restoration Project of Mozambique, in which ranger patrols and wildlife restocking conserve and enhance a core protected area; protection of nearby Mt. Gorongosa secures freshwater for local communities and wildlife; and conservation education, wildlife-compatible enterprises, and solutions to human-elephant conflict aim to improve public support for conservation measures and ultimately make biodiversity investments more sustainable. Other activities focus on specific threats wherever they occur, such as Asia's Regional Response to Endangered Species Trafficking (ARREST), which strengthens law enforcement capacity and reduces demand for wildlife products in Southeast Asia while transferring lessons learned to stakeholders in source and transit countries. All biodiversity projects are designed based on an analysis of threats, and all site-based activities target biologically significant areas.

Dedicated GCC-SL funding for the policy, planning, accounting, and monitoring aspects of forest management for climate change mitigation totaled \$139.4 million in FY 2011. These funds were applied to maintaining or enhancing carbon sequestration by forests, except for \$5.8 million used to advance low-emissions development more broadly. GCC-SL programs support targeted efforts to reduce emissions from deforestation and forest degradation (REDD+) while achieving associated biodiversity and livelihoods results. All USAID-supported climate change mitigation projects monitor and report on greenhouse gas emissions avoided or sequestered.

**Figure 1: Intersections among USAID programming in forestry, climate change mitigation and biodiversity conservation, FY 2011.** About 96 percent of climate change mitigation (GCC-SL) funds and 46 percent of biodiversity funds contributed to forest conservation and management. Climate change and biodiversity funds are mutually exclusive.



**Notable Results in FY 2011**

USAID programs and partners advance the difficult work of conservation, with or without recognition, but every year there are achievements which deserve particular attention. A few of the most notable results of USAID assistance in this sector in FY 2011 include:

- Wildlife policies and laws were strengthened in Central Africa, including an unprecedented agreement between the Republic of Congo and the Democratic Republic of Congo, for sustainable management of the largest Ramsar Wetland in the world, *Lac Tele – Lac Tumba*.
- Following several years of USAID support for sustainable forest management, surveys in 2011 found forest cover loss in Guatemala’s Mayan Biosphere Reserve to be the lowest on record since 2004.
- Building on USAID investments in community conservation, the Government of Mozambique officially established a 48,000 hectare reserve and 89,000 hectare buffer zone to conserve

- open water, wetlands and forest watershed of Lake Niassa, home to 1000 species of fish.
- In Tacana indigenous territory in lowland Bolivia, the San Miguel del Bala Eco-lodge won first place for the *TO DO! 2011* Award in recognition of social and environmental sustainability. Lodge revenue increased 35 percent over the previous year due to business planning assistance supported by USAID’s Initiative for Conservation in the Andean Amazon (ICAA).
- Angola established two national parks comprising 6.8 million hectares, informed by USAID biodiversity inventories and other assistance. The parks provide habitat for wildlife in Angola and secure dry-season water for people and wildlife in Botswana’s Okavango Delta.
- An assessment of management effectiveness of 117 marine protected areas (MPAs) in the Philippines revealed increasing commitment to marine conservation by national and subnational government entities. National awards for the four best-managed MPAs all went to local government and community partners of USAID.

## Conservation Is Development

Conservation is central to international development efforts because the goods and services provided by biodiverse ecosystems are essential to human well-being. Forests, long valued for provision of timber, food, and fuel, are now recognized for regulating the quality and quantity of fresh water, and for key roles in climate change mitigation and adaptation. The impacts of biodiversity loss generally disproportionately impact vulnerable groups including women, children and indigenous peoples. In contrast, biodiversity conservation actions can contribute directly to development outcomes by enhancing the sustainability of rural livelihoods, improving health outcomes, promoting gender equality, enhancing local governance over natural resources, and increasing government transparency and accountability. Conserving ecosystems also protects investments in other development sectors by ensuring that gains in poverty alleviation, food and water security, human health, and disaster risk reduction can be sustained over the long term.

Programs supported during FY2011 aligned with the USAID Policy Framework: 2011–2015, in particular with the goals of sustainable economic growth, food security, democracy and governance, and climate change. Approaches and results contributing to these goals are detailed below.

**Sustainable economic growth:** Conservation and natural resource management has high potential to bring jobs and income to rural areas not reached by the usual drivers of economic growth. From direct employment opportunities, to income from sale of sustainably harvested natural products, to community revenue sharing

of tourism receipts, USAID assistance in FY 2011 helped an estimated 630,000 people derive increased economic benefits from sustainable natural resource management and conservation. Examples include:

- Agency support for community forestry in Liberia included development of market value chains for natural products which provide financial incentives to conserve natural forest. About 1,800 kilograms of high-quality *Griffonia*, a native understory plant with seeds valued for herbal medicine in international markets, was harvested from USAID project areas, a 257 percent increase from the 2009/2010 harvest season.
- In Guatemala, ongoing support for community based natural resource management contributed to the maintenance of over 500,000 hectares of high-biodiversity forest, including 230,000 hectares managed for non-timber forest products which generated \$643,563 for local communities. Technical assistance to the Community Forestry Service Enterprise (FORESCOM) was validated by Guatemalan Exporters Association recognition of FORESCOM as 2011's Best Business Linkage and Best Exporting Small or Medium Enterprise.
- Overexploitation of wild animals and plants in Cambodia is endangering biodiversity, reducing incomes, and driving many people to participate in illicit production and trade in narcotics. To make standing forests profitable and preferable to other uses, USAID programs trained more than 1,000 people in sustainable natural resource management and improved harvesting techniques and market channels for non-timber forests products such as bamboo, rattan, honey, resin, medicinal plants and mushrooms.

**Table I. USAID Funding for Biodiversity and Forestry Programs, FY 2011**

Operating Unit or Program	FY 2011 Biodiversity Funding in US\$	FY 2011' Forestry Funding in US\$
<b>Total of All Programs</b>	<b>\$188,290,119</b>	<b>\$231,984,135</b>
<b>Tropical Countries</b>	<b>\$183,740,119</b>	<b>\$225,464,635</b>
<b>SUB-SAHARAN AFRICA</b>		
Africa Regional	\$2,000,000	\$1,100,000
Central Africa Regional	\$15,750,000	\$21,140,000
East Africa Regional	\$2,000,000	\$0
Southern Africa Regional	\$2,500,000	\$0
West Africa Regional	\$3,000,000	\$6,121,445
Ghana	\$0	\$4,000,000
Kenya	\$4,500,000	\$2,700,000
Liberia	\$3,500,000	\$3,500,000
Malawai	\$2,000,000	\$6,588,000
Mozambique	\$3,500,000	\$1,932,359
Rwanda	\$2,000,000	\$2,250,000
Senegal	\$2,000,000	\$1,000,000
South Sudan	\$4,000,000	\$0
Tanzania	\$7,000,000	\$1,450,000
Uganda	\$5,500,000	\$0
Zambia	\$0	\$5,072,000
<b>Sub-Saharan Africa Total</b>	<b>\$59,250,000</b>	<b>\$56,853,804</b>
<b>ASIA and the MIDDLE EAST</b>		
Asia Regional	\$1,000,000	\$0
Regional Development Mission for Asia	\$10,000,000	\$12,800,000
Afghanistan	\$700,000	\$0
Bangladesh	\$6,000,000	\$9,500,000
Cambodia	\$3,500,000	\$7,000,000
China	\$250,000	\$0
India	\$0	\$4,000,000
Indonesia	\$17,500,000	\$15,052,360
Lebanon	\$0	\$1,500,000
Nepal	\$3,000,000	\$4,669,500
Philippines	\$9,000,000	\$6,957,235
Vietnam	\$0	\$4,000,000
<b>Asia and the Middle East Total</b>	<b>\$50,950,000</b>	<b>\$65,479,095</b>

**Table I. USAID Funding for Biodiversity and Forestry Programs, FY 2011 (continued)**

Operating Unit or Program	FY 2011 Biodiversity Funding in US\$	FY 2011 <sup>1</sup> Forestry Funding in US\$
<b>EUROPE AND EURASIA</b>		
Russia	\$500,000	\$250,000
Ukraine	\$100,000	\$100,000
<b>Europe and Eurasia Total</b>	<b>\$600,000</b>	<b>\$350,000</b>
<b>LATIN AMERICA AND THE CARIBBEAN</b>		
Latin America and the Caribbean Regional	\$13,000,000	\$7,445,660
South America Regional	\$0	\$4,000,000
Central America Regional	\$2,000,000	\$4,000,000
Bolivia	\$5,000,000	\$2,800,000
Brazil	\$9,500,000	\$10,700,000
Colombia	\$3,000,000	\$3,825,000
Dominican Republic	\$1,200,000	\$0
Ecuador	\$5,000,000	\$4,060,164
El Salvador	\$2,500,000	\$275,000
Guatemala	\$3,300,000	\$7,700,000
Guyana	\$200,000	\$0
Haiti	\$1,000,000	\$0
Honduras	\$3,500,000	\$2,900,000
Mexico	\$1,500,000	\$8,480,000
Peru	\$4,000,000	\$17,230,000
<b>Latin America and the Caribbean Total</b>	<b>\$54,700,000</b>	<b>\$73,415,824</b>
<b>CENTRAL BUREAUS</b>		
Bureau for Economic Growth, Education and Environment <sup>2</sup>		
Forestry and Biodiversity Office <sup>2</sup>	\$13,627,514	\$8,770,001
Global Climate Change Office <sup>2</sup>	\$0	\$17,036,781
Global Climate Chang Coordinator	\$0	\$7,700,000
Land Tenure and Resource Management Office <sup>2</sup>	\$4,053,000	\$1,562,089
Planning, Learning and Coordination Office <sup>2</sup>	\$500,605	\$66,541
Trade and Regulatory Reform Office <sup>2</sup>	\$160,000	\$750,000
Water Office <sup>2</sup>	\$1,284,000	\$0
Bureau for Global Health	\$3,165,000	\$0
<b>Central Bureaus Total</b>	<b>\$22,790,119</b>	<b>\$35,885,412</b>

<sup>1</sup> Nearly all forestry funding is from forest-focused climate change mitigation and biodiversity conservation investments.

<sup>2</sup> The Bureau for Economic Growth, Agriculture and Trade (EGAT) was reorganized in FY2012 and renamed the Bureau for Economic Growth, Education and Environment (E3). The funding table describes the allocation of FY2011 funds among E3 offices according to their FY2012 names (current at the time of writing). As part of reorganization, the Natural Resource Management Office and Environment and Science Policy Office were discontinued, and teams charged with Biodiversity, Forestry, Land Resources Management, Water Resources Management and Global Climate Change were elevated to the offices listed. The Program Analysis, Implementation, Communications and Outreach Office was renamed the Planning, Learning and Coordination Office. The Trade and Regulatory Reform office used to be a subset of the Economic Growth Office.

**Food Security:** The Earth's human population reached seven billion in 2011 and continues to grow, with some experts estimating that food production will need to double by 2050 to feed everyone. Better management of freshwater and marine ecosystems, agroforestry and sustainable harvest of wild foods have proven to be part of the solution. In addition, conservation planning helps allocate land and water for optimal benefit: protection of coral reefs can make fishing elsewhere more productive, and climate modeling can show where game reserves are more lucrative and sustainable than ranching or farming. Food security results from biodiversity and forestry programming in FY2011 include:

- USAID support for participatory zoning and productive farming in Central Africa has reduced poverty and food scarcity for over 10,000 households while decreasing conversion of high-biodiversity forests to agricultural use. More than 5,800 people received agricultural sector productivity training in 2011, resulting in production and sales of high-value crops including maize, rice, groundnuts and soybeans. People benefiting from livelihoods improvement have agreed to forest conservation measures and to forego illegal hunting.
- In Haiti's coastal zone of Limbé, overfishing and degradation of mangrove "fish nurseries" are reducing fish stocks and damaging coral reefs. To date, 178 hectares of mangroves have been rehabilitated, crab harvest and sales are improving, and mangrove-based honey production benefits 200 people, creating an economic buffer while restoring fish habitat.
- A USAID program which paid people for the opportunity cost of not logging high-biodiversity forests has been adopted by the Government of Colombia and is now making payments through the *Familias Guardabosques* (Ranger Families) program. The funds are invested in food security and productive projects through a revolving fund. Cacao, rice, cassava and fisheries production have all been financed with this mechanism.

**Democracy and Governance:** People with ownership or access rights to natural resources are more inclined to manage them sustainably, and many USAID programs strive for this outcome. Community institutions established to manage forests have helped maintain order during conflict, and have been critical to restoring governance systems in other sectors. In contrast, unmanaged resources tend to become degraded and subject to unsustainable or criminal activity, such as wildlife trafficking and illegal logging, which undermine rule of law and have financed armed militias. USAID support for programs like the Forest Legality Alliance make trade in illegal wood products more difficult and helped level the playing field for businesses and countries which produce legal and sustainable timber. Governance results in FY2011 include:

- A joint USAID and US Forest Service team supported consultations between the Peruvian Congress and Forest Authority and over 2,000 indigenous leaders throughout the Amazon and incorporated their input into the process that resulted in the passage of the National Forestry and Wildlife Law.
- In Tanzania, USAID supported the Government's approval of five new regulations for the operationalization of the Wildlife Conservation Act (2009). This includes legal support to the Wildlife Management Areas processes in which governance responsibilities of critical wildlife areas outside of protected areas is transferred to communities.
- In the Philippines, USG assistance resulted in completion and enactment of wildlife law enforcement codes, and trainings of 177 judicial representatives and wildlife enforcement officers. These activities resulted in a 50 percent decrease in the time of adjudication.



**Climate Change:** Deforestation and forest degradation account for 14 to 20 percent of global greenhouse gas emissions, comparable to the entire global transportation sector. Reducing emissions through prevention of forest loss is considered essential to slowing climate change and allowing people and ecosystems more time to adapt to climate change impacts. Many USAID programs in FY 2011 generated indirect climate change mitigation benefits, while several new GCC Sustainable Landscapes programs began. Results from FY 2011 include:

- USAID assistance led the Government of Bangladesh to bring the entire Sundarbans, the largest mangrove forest in the world and critical habitat for the Bengal tiger, under co-management by communities and the government. Over 630,000 hectares are now better managed, making communities less vulnerable to climate change impacts while sequestering 266,000 metric tons carbon dioxide annually.
- In Guatemala, USAID contributed to the completion of the Deforestation Greenhouse Gas Emissions Baseline for the Northern Guatemala Lowlands, a 40,000 km<sup>2</sup> region where approximately 80 percent of the deforestation in Guatemala takes place. This is the first baseline developed in Latin America with REDD+ methodology and validated by the globally recognized Verified Carbon Standard.
- USAID support helped Kenya become the world's first country with a reforestation program dual-certified under the Verified Carbon Standard and Climate, Community and Biodiversity Standard. Because of this certification, 64,000 tons of carbon credits were sold in the global carbon market, benefiting landless people, youth and women allowed to plant and manage indigenous trees species along rivers in government protected areas.

## Conservation 2.0

Through the application of science and technology, USAID remained pivotal in establishing biodiversity conservation and sustainable forest management as an effective means for achieving substantial and lasting development benefits. The Agency continued leadership in this area by supporting innovative approaches and applied research to tackle intractable or emerging problems. Some applications of science and technology in FY2011 include:

- In partnership with NASA and USAID's long-term Demographic and Health Survey (DHS) program, an analysis of forest cover change and DHS data in Malawi found a strong positive correlation between percent forest cover and good nutrition, recommending further research into how conservation generates public health outcomes.
- USAID initiated support for the Nepal Tiger Genome project, which applies genetic research tools and non-invasive techniques to identify individual tigers, better understand species diversity and map tiger range. Results will help prioritize habitat conservation efforts and combat poaching.
- Law enforcement strengthening and land use planning in the Boma-Jonglei landscape of South Sudan is guided by USAID-funded aerial surveys, antelope and elephant radio collar tracking, and other forms of monitoring of wildlife, livestock, and human activity.
- In collaboration with the USDA Forest Service, USAID provided substantial assistance in the design of Peru's first modern National Forestry Information System (FMIS). The system helps control the chain of custody for plant and animal species protected under the Convention on International Trade in Endangered Species (CITES), allowing for better enforcement of the forestry law and identification of areas to conduct investigations.

USAID works to maximize and sustain conservation impact by scaling up effective approaches, whether new or established. For example, training in forest fire management was supported in about a dozen countries in 2011, generating immediate and lasting results in Bolivia, Brazil, Ethiopia, Guyana, Mexico, Malawi, Mozambique, Rwanda, Senegal and Sierra Leone, among other countries. Certification of forests and forest products, which leverages international markets demanding sustainable goods, was advanced in Gabon, Guatemala, Indonesia, Laos, Malaysia, Panama, Peru and Republic of Congo, collectively putting or maintaining almost 7 million hectares under third-party certification.

Innovation and scale intersect through conservation finance, with some examples already provided under the food security and climate change sections above. USAID support for Ecuador's *Socio Bosque* conservation payments program, one of the pioneer efforts in the sector, will conserve 360,000 hectares of forest over the next 20 years and benefit nearly 10,000 people. Also in Ecuador, USAID assistance connects major downstream users of fresh water to the high-value watersheds that provide it, thus far financing improved management of 445,000 hectares of

Andean cloud forest and other biodiverse areas. Where government or private sector finance is not practical, local grant making foundations can be established and capitalized. For example, in 2011 the interagency Tropical Forest Conservation Act (TFCA) Secretariat, hosted by USAID, negotiated the country's second debt relief agreement with Indonesia, worth \$28.5 million for conservation of orangutan habitat in Kalimantan.

No matter what the threat, objective or approach, conservation efforts succeed when all the stakeholders involved, from park rangers and politicians to fishermen and farmers, understand the value of intact ecosystems, can participate in decisionmaking about how resources are used, and have the incentives in place to use them wisely. To this end, USAID biodiversity and forestry programs apply a people-centered approach to conservation, working to help those with authority over natural resources gain the necessary skills to manage them well, and in turn ensure that rights to manage and benefit from natural resources are held by people who depend on them the most. This simple formula, customized and applied across hundreds of activities, will continue to guide USAID programming into the future.



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