BIODIVERSITY CONSERVATION AND FORESTRY PROGRAMS

2014 Report

FISCAL YEAR 2013
Results and Funding

About This Report

This report fulfills the requirement for an annual report on implementation of Section 118 of the Foreign Assistance Act (FAA), on Tropical Forests, while communicating support for Section 119, on Endangered Species, by the United States Agency for International Development (USAID).

Section 118 of the FAA focuses on the "continuing and accelerating alteration, destruction, and loss of tropical forests in developing countries" and mandates that USAID take actions that 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.

Section 119 of the FAA asserts "the extinction of animal and plant species is an irreparable loss with potentially serious environmental and economic consequences for developing and developed countries alike. Accordingly, the preservation of animal and plant species through the regulation of the hunting and trade in endangered species, through limitations on the pollution of natural ecosystems, and through the protection of wildlife habitats should be an important objective of the United States development assistance."

Sections 118 and 119 also require that USAID analyze threats to tropical forests and biodiversity prior to formulating any country development strategy, in order to identify the actions needed to conserve these in each country and the extent to which actions taken meet the needs of tropical forests and biodiversity. At the project level, the design of all forestry and biodiversity activities is based in part on these analyses.

USAID's Biodiversity Conservation and Forestry Programs, 2014 Report

FY 2013 Results and Funding

June 2014

Biodiversity is life: **literally, the degree of variation of life on Earth. Biodiversity is also essential to** *living:* **food on the table, better health, and insurance against lean times**. Conserving biodiversity means improving governance of natural resources, which often provides rural and marginalized people with their first taste of democracy and public accountability. It means local rights and authorities over land and water, forests and rangelands, fish and wildlife—and strong incentives for long-term planning and sustainable use. Conservation requires industries and enterprises that restore natural capital. The economic potential of biodiversity is realized hand-in-hand with an appreciation of the value—and wonder—of nature.

USAID biodiversity and forestry programs made a significant and lasting impact on nature, people, and policies around the world in 2013, improving prospects for conservation across more than 235 million acres—an area the size of California, Oregon, and Michigan combined. This report highlights some of the approaches supported by USAID to generate these results, such as partnering with indigenous people and local communities to manage natural resources and applying innovations in policy, science, and technology to conservation challenges. USAID FY 2013 funds supported $180 million in biodiversity programs and $142 million in forestry programs.

Two milestones in 2014 are indicative of Agency conservation priorities in 2013 and the foreseeable future: (1) USAID's first Biodiversity Policy was approved and launched; and (2) the United States National Strategy to Combat Wildlife Trafficking was issued, with USAID playing a pivotal role in its development and implementation. Together, these represent a renewed commitment to development through conservation, including efforts to bolster food security, health, personal safety, and rule of law through tackling wildlife crime.

Advancing the Biodiversity Policy
The USAID Biodiversity Policy was approved and publicly launched in 2014, and implementation is underway. The policy provides a blueprint for how the Agency will achieve its vision of conserving biodiversity for sustainable, resilient development. It builds on USAID's long history of conserving a global biological heritage and reflects a deep understanding of the role that healthy natural systems play in ending extreme poverty and achieving the Agency's other development goals. It recognizes that human well-being and progress and durable development gains are not possible unless these systems are valued and safeguarded. Major elements include:

- a commitment to integrate biodiversity conservation into key development sectors such as health and food security, and to document the development benefits of conservation;
- a targeted approach whereby more than half of biodiversity funds go to the highest priority "Tier 1" countries and regions, which are supported by more rigorous program design and monitoring; and

- an emphasis on evidence and knowledge, with USAID maintaining and expanding its leadership role in generating and sharing best practices.

More information on the policy is available at www.usaid.gov/biodiversity/policy.

Combating Wildlife Trafficking

USAID's comprehensive response to wildlife trafficking engages a diverse set of actors—from community scouts, to federal agencies, to airlines and airports—throughout the complex network of wildlife product demand and supply. The Agency actively participated in the development of the U.S. National Strategy to Combat Wildlife Trafficking, announced on February 11, 2014, and is positioned to continue to meet this challenge. An estimated $40 million in FY 2014 funds will be used to counter wildlife crime, including a Wildlife Trafficking Technology Challenge that engages the expertise of scientists, programmers, and inventors in partnership with leading technology and media companies, wildlife crime specialists, and experts from across the U.S. Government.

In 2013, USAID training of judiciary and law enforcement officers resulted in the first prosecutions for wildlife trafficking in Guinea and illegal fishing in Ghana. In Kenya, support to the Government and civil society helped reform and pass the Wildlife Conservation and Management Act of 2013, which increases penalties for poaching and trafficking and improves benefit sharing with communities. Soon after the law went into effect in January 2014, a man caught with one elephant tusk was sentenced to pay a $230,000 fine or spend seven years in prison. Mozambique's Conservation Areas Act, a bill strengthened by USAID technical assistance and passed by the national parliament in April 2014, includes similar provisions and is expected to generate comparable results.

Leveraging Science and Technology

The profiles in this report depict how USAID identifies and supports conservation champions—from communities and scientists to national agencies and the private sector—through training, stronger rights, and a louder voice. The profiles also identify where USAID is attacking threats that cause harm to species, as well as local populations.

To support the people making a difference in the areas under threat, USAID is capitalizing on longstanding science and technology platforms, as well as developing new partnerships to inform policies and practices at all levels. For example, building on forest atlases developed for the Congo Basin through USAID's Central Africa Regional Program for the Environment, the Global Forest Watch partnership plans to roll out "real-time" alerts about forest incursions around the world that will be made available to key ministries and conservation partners who can take action at the site level.

In 2014, USAID's Office of Forestry and Biodiversity and the Higher Education Solutions Network will collaborate to develop a database linking the Agency's Biodiversity Policy guidance to key lessons and experience within the Agency, as well as evidence from literature. This partnership and many others bring new rigor, and new constituencies, to galvanize the Biodiversity Policy.

While some challenges to conservation are increasing—the burgeoning wildlife trade, instability and conflict in key countries, unplanned infrastructure development and extraction—the constituencies and tools for conservation are also growing. USAID is moving to address immediate threats to biodiversity and capitalizing on new partnerships, science, and innovations necessary to scale up and sustain conservation results.

Approaches and Results

USAID biodiversity and forestry efforts aim to maximize conservation outcomes while improving the lives of local people. In 2013, projects in nearly 60 countries (shaded green on the maps in this section) supported governments in the operation of national parks and reserves; helped communities gain capacity and rights to manage and benefit from forests, wildlife, and fisheries; and improved countries' ability to plan development without compromising their natural heritage.

A selection of results from 2013, below, serves to recognize achievements large and small while illustrating the work USAID supports around the world. These are followed by three profiles that provide depth on some of the Agency's signature approaches: working with communities to govern natural resources and enforce the law (p. 8), ensuring robust monitoring to promote transparency and accountability (p. 10), and supporting territorial integrity and management capacity of indigenous peoples (p. 12). All of the profiles demonstrate the value of applying technology and taking a comprehensive, participatory approach to conservation.

Notable Results of USAID Assistance in 2013

USAID continued to prioritize support for field operations, including **targeted training of park rangers, community scouts, police, prosecutors, and judges that improved application of the law** related to wildlife, fisheries, and timber crime in nearly every country with biodiversity programs, especially countries in the Congo Basin and Southeast Asia, Gambia, Ghana, Guatemala, Indonesia, Kenya, Mozambique, Philippines, Rwanda, and Tanzania. Broader support for park management included **system-wide strengthening of protected areas** in Honduras, Brazil, and nations managing marine areas in the Western Indian Ocean and Coral Triangle.

In 2013, **USAID's Pioneers Prize was established to recognize excellence in science and technology in Agency programs**. Of nearly 90 submissions, seven winners were chosen for bringing the full potential of technology to bear on overcoming development challenges and improving lives. Two winners and two honorable mentions conserve biological resources:

- **Conflict Resolution on Land and Natural Resources Program** (Protierra Program) *USAID/Colombia*
- **Mobile Platform for Inshore Fisheries Data Collection and Analysis in the Solomon Islands** (Coral Triangle Support Partnership) *USAID Regional Development Mission for Asia*

- **Using Satellite Images to Map and Monitor Congo Basin Rainforests** (OSFAC Forest Satellite Observatory) *USAID Central Africa Regional Program for the Environment*
- **SMS Forest Fire Detection and Monitoring System in Nepal** (SERVIR Program) *Bureau for Economic Growth, Education, and Environment*

Four countries—**Cambodia, Guatemala, Jamaica, and Zambia—signed separate memoranda of understanding with the United States for Enhancing Capacity for Low Emission Development Strategies** (EC–LEDS), a U.S. initiative to help developing countries accelerate sustainable, climate-resilient economic growth. USAID works with other U.S. agencies to support the planning and capacity needed to reduce deforestation and forest degradation in each country.

Country-specific results include:

1 Timber and non-timber forest product **certification in Guatemala conserved more than 1.5 million acres of forest and generated nearly $4 million in sales of certified forest products** in the Petén, Western Highlands, and Verapaces regions.

2 **In Honduras, a national protected areas fund was re-engineered to address government and donor concerns and secure $2 million through an eco-tax**, a major step in generating the funding required by the national park system.

7 **An 11-mile corridor critical to jaguar movement in Colombia was secured with solar-powered electric fences** that helped reduce predation on cattle while providing electricity in rural areas not served by utilities.

8 Harvesters in Ecuador's crabbing associations established direct sales to large buyers and improved the quality of crabs sold, **doubling the price received for each crab from this sustainably managed fishery**.

9 In the biologically diverse Tumbesian dry forest, **Ecuadoran scientists developed a new method for extracting valuable rosewood oil without having to cut down the rare trees, distilling it from the fruit instead of the wood**. Local people gained a good source of income and wildlife is returning, encouraging eight municipalities to petition for the 1.2 million-acre forest to be a biosphere reserve.

10 Monitoring and management by the **Quito Water Fund improved the management of nearly 500,000 acres, including the high-elevation *paramos* grasslands of Antisana and Cotopaxi National Parks**. The fund's model of charging a premium to downstream, high-volume users to finance conservation of the water's source has been replicated by 35 water funds throughout the world.

11 The Agency for the Supervision of Forest Resources and Wildlife in **Peru developed a tool for monitoring and verifying the geographic origin and legality of Peruvian broadleaf mahogany** and trained 90 researchers and managers in collecting biological samples and conducting DNA analysis of Amazon forest species.

12 **Five territories with indigenous peoples living in voluntary isolation in Peru and Ecuador were legally demarcated and mapped**, a critical first step to establishing indigenous reserves. Areas managed by indigenous peoples are, in most cases, equally or better-managed than national parks.

13 **Agencies, research institutions, and local organizations in Brazil are better able to measure and report on greenhouse gas emissions** through the use of Light Detection and Ranging (LIDAR) aerial imaging to assess carbon storage within specific forested areas. More than 35,000 acres in 16 different areas had been surveyed by LIDAR as of September 2013.

3 In partnership with the Spiny Lobster Initiative, **Miskito Indians and the Government of Honduras laid the groundwork for declaring an artisanal fishing area that will be the largest marine protected area in Central America**.

4 At key nesting beaches in Panama, Costa Rica, Nicaragua, El Salvador, and Honduras, **nearly one million sea turtle hatchlings have been incubated and released**.

5 **Scientists established *ex situ* assurance colonies of three frog species in Panama vulnerable to extinction** from chytrid fungus infection, while conducting research and public awareness to overcome this crisis.

6 **More than 115,000 trees were planted by farmer associations in the upper watersheds of Port-au-Prince and Saint Marc in Haiti**, stabilizing hillsides no longer needed for agriculture because of 250 greenhouses that produce more food on less land.

14 For the first time, **community organizations in Gambia complied with and enforced sustainable fisheries management measures and good governance practices** specified in co-management plans, such as seasonally closed areas and restrictions on harvesting juvenile fish.

15 **Two new community forests were established in the Upper Guinean ecosystem, for a total of 30** such areas comprising 500,000 acres in the buffer zones of parks in Guinea, Sierra Leone, and the Ivory Coast.

16 Regional training workshops in Central and East Africa introduced the Spatial Monitoring and Reporting Tool (SMART) for making conservation patrols more strategic and accountable. **SMART is now being piloted in more than 20 sites across 12 countries in Africa, including all eight landscapes in USAID's regional program in the Congo Basin.**

17 **More than 400 rangers, wildlife law enforcement agents, and judiciary officials were trained in anti-poaching techniques in Central Africa**. As a result, national and local authorities arrested and prosecuted more than 130 criminal poachers and seized dozens of weapons.

18 In the country's first legal sale, **135 Angolans sold sustainably harvested Devil's Claw (a medicinal plant of high value in Germany) to a fair trade buyer**, allowing them to pay school fees and meet other household needs.

19 An African Elephant Summit was held in December 2013, where **environment ministers and senior officials from 30 countries agreed on 14 urgent measures to halt the illicit trade in ivory and secure elephant populations across Africa**.

20 **Ranger-based monitoring of wildlife and illegal activities covered 95 percent of Rwanda's Nyungwe National Park and reduced illegal activities by 32 percent** over 2012 levels. The system was fully transferred to government authorities in 2013.

21 **Two community-run Wildlife Management Areas (WMAs) in Tanzania are earning $300,000 to $500,000 annually in tourism revenue**, which is being reinvested back into the communities in the form of schools, teacher housing, dispensaries, and school fees for orphans. In five WMAs, building visitor centers, ranger posts, and other infrastructure employed more than 15,000 people.

22 **In Ethiopia, about 67 million tree seedlings were planted on communal lands,** and more than 800 community bylaws were developed to promote sustainable natural resource management focused on maintaining soil and water resources essential to food production.

23 The Government of **Kenya drafted and passed a new Wildlife Law that increased penalties for poaching and trafficking and improved benefit sharing with communities**. The new law was tested soon after going into effect on January 10, 2014, when a man caught with a 7.5 pound tusk was sentenced to pay a 20 million Kenyan shilling ($230,000) fine or serve seven years in prison.

24 **A program to certify marine protected area (MPA) professionals in the Western Indian Ocean was endorsed by the World Commission on Protected Areas** for its work to raise competency standards for MPA rangers, managers, and policymakers and attracted a five-year funding commitment by Sweden's international development agency.
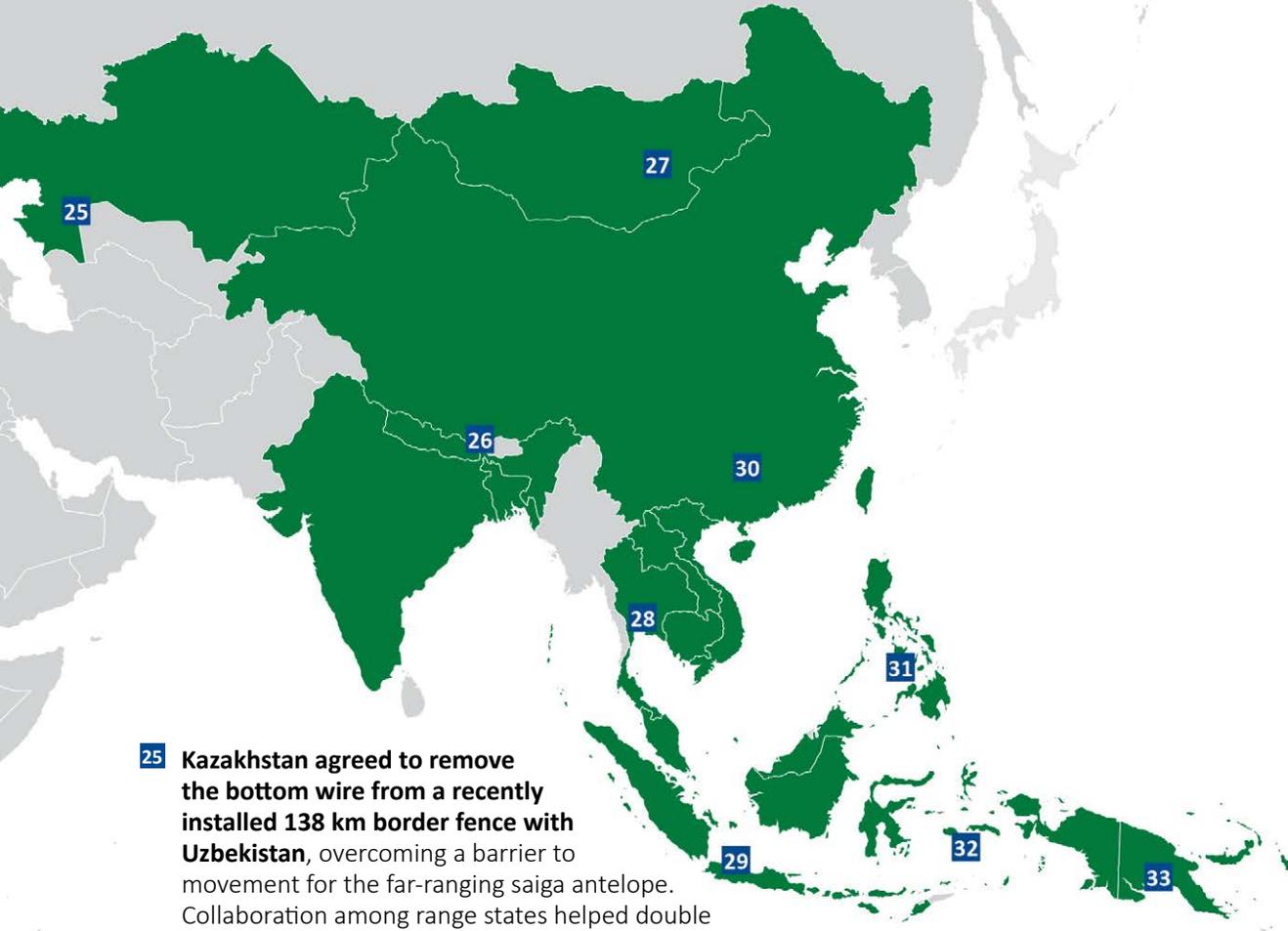
25 **Kazakhstan agreed to remove the bottom wire from a recently installed 138 km border fence with Uzbekistan**, overcoming a barrier to movement for the far-ranging saiga antelope. Collaboration among range states helped double the population of saiga in Kazakhstan between 2008 and 2013.

26 New community forest designations strengthened forest user groups, and high-mountain patrols contributed to a **33 percent increase in the snow leopard population in and around protected areas at the border of eastern Nepal and Sikkim, India**.

27 The **Mongolian Parliament passed environmental laws that require "net positive impact"** from mining and other infrastructure-intensive development. High-level officials and industry leaders committed to best practices that avoid, mitigate, and offset biodiversity loss.

28 To date, **800 officers in 300 government agencies from 20 countries have received training that helps Southeast Asian nations to enforce wildlife laws and dismantle wildlife trafficking networks**. One training event led to Operation Cobra in January 2013, a 22-country law enforcement campaign that yielded hundreds of arrests and illegal wildlife products worth more than $100 million. Its success inspired Cobra II in January 2014, involving 28 countries, more than 400 arrests, and seizures including 36 rhino horns and three tons of ivory.

29 **Conservation management and monitoring plans in 13 Indonesian logging concessions improved conservation of nearly 2.5 million acres of tropical forest**, including critical orangutan habitat.

30 Through collaboration with the country's largest search engine, social media, and e-commerce providers, **illegal wildlife trade has been substantially decreased in China's online markets**, and millions of Chinese have been educated on the impacts of wildlife trafficking.

31 **A Law Enforcement Management Information System patterned on a U.S. model enables Philippines authorities to monitor the status of fisheries-related violations, apprehensions, and other illegal activities**. Operations manuals for fisheries and forestry law enforcement further bolster efforts to fight wildlife crime and illegal logging.

32 The Coral Triangle Initiative, a partnership to conserve the world's most diverse marine ecosystems in **a six-country region stretching from Indonesia to the Solomon Islands, launched a Marine Protected Area System Network, the first of its kind in the world**, with associated MPA management, monitoring, and evaluation systems for tracking progress toward Initiative goals.

33 **A partnership with the University of Papua New Guinea is helping to conserve biologically rich mangrove forests** by developing standards for measuring, and ultimately valuing, carbon above and below the surface and applying these standards to 30 research plots.

Communities, Parks Authorities, and Police Put the Brakes on Poaching in Nepal

Understanding and sustaining Nepal's victory for tigers, rhinos, and elephants in 2013

On March 3, 2014, the first World Wildlife Day, while many countries were taking stock of the damage from one of the worst years on record for wildlife trafficking, Nepal declared a major victory: no tigers, rhinos, or elephants were poached during the year-long period ending in February 2014. Even more remarkable, Nepal also achieved a poaching-free year in 2011. This reprieve from hunting is having the desired effect: Between 2009 and 2013, Nepal's tiger population increased by 63 percent.

Nepal's zero-poaching milestone stems from robust management and monitoring of community forests, effective patrols of protected areas, diligence by the Central Investigation Bureau of Nepal Police to break down illegal wildlife trade networks, and heightened coordination among these groups. USAID supports the work of these groups through partners as varied as World Wildlife Fund (WWF), INTERPOL, and the Federation of Community Forestry Users Nepal—the largest civil society network in the country.

USAID's primary channel of support is *Hariyo Ban*, Nepali for "Green Forest." Implemented by WWF-Nepal in partnership with local organizations, Hariyo Ban aims to reduce threats to biodiversity, slow deforestation, and help communities adapt to climate change. The program centers on the Terai Arc and Chitwan-Annapurna Landscapes, home to the Bengal tiger, greater one-horned rhinoceros, Asian elephant, snow leopard, red panda, and more than 11 million people.

Community forests are more vulnerable to poaching than protected areas, where patrols are reinforced by the Nepalese Army. Thus Hariyo Ban helped to establish 125 Community Based Anti-Poaching Units in the community forests. Some 1,840 members—nearly a third of them women—patrol these forests and report suspected illegal activities. The units also use street drama, pamphlets and posters, rallies, games, folk songs, and radio programs to engage the public. In return, unit volunteers get access

A lone rhino in the wetlands of the Namuna Buffer Zone Community Forest at Nawalparasi, Nepal.
Photo: WWF-Nepal/Kashish Das Shrestha

to training in marketable skills like fish farming and repair of mobile phones, bikes, or electrical appliances. This approach is paying off: Management measurably improved in more than 1.3 million acres of biodiverse forest in 2013.

Asserting that three species were not impacted by poaching requires a high level of confidence in wildlife data. USAID contributed to improved monitoring accuracy by co-financing the 2013 national tiger census, in which partners WWF-Nepal and the National Trust for Nature Conservation worked with authorities to install and analyze images from almost 500 camera traps in five protected areas and three wildlife corridors in the Terai. The recorded increase from 121 to 198 individuals in just four years suggests that Nepal will double its tiger population ahead of the 2022 target set with India, Bangladesh, Malaysia, Russia, and other tiger range states in 2010. USAID also supports identity-based monitoring of rhinos in parks, whereby every individual is recognized without the need for collars or tags and observed on a regular basis.

In December 2012, while community patrol units were established in rural areas and parks geared up for the tiger census, members of Nepal's police forces received specialized training from INTERPOL in combating environmental crime. The training, part of the USAID-supported Project Predator program, focused on illegal poaching and trade in tigers. Participants learned about investigation techniques, concealment methods, questioning wildlife smugglers, tracking illicit goods to major buyers, and using INTERPOL's system of notices.

In January 2013, Nepalese authorities applied skills from INTERPOL and other training to make a string of arrests and seizures across the country. Six men en route to China, who together had seven tiger skins and 167 kg of tiger bones, were captured. The six smugglers faced fines equivalent to $500 to $1,000, five to ten years in prison, or both. Across tiger range states, similar training by INTERPOL contributed to enforcement operations leading to more than 50 arrests and the seizure of 40 live tigers, as well as tiger parts and other wildlife products.

USAID also supports the use of genetic data for conservation. Over two years, the Nepal Tiger Genome Project collected 1,200 samples of carnivore scat to create a database of tiger genetic "fingerprints" with information on individual animals and the population as a whole. This non-invasive survey method validated the findings of the tiger census and showed where certain populations have reduced genetic diversity due to geographic isolation. Hariyo Ban is using the findings to target action in habitats essential to tigers and other wildlife.

While the frontline efforts of community patrols, park rangers, and police are prominent means of conserving wildlife, two decades of training in both the science and the business of sustainable forest management have generated invaluable local goodwill for conservation. Today, 18,000 forest user groups manage 4.4 million acres of forest, and 40 percent of Nepalis benefit from community forest management. Several groups earn substantial revenue from the sale of sustainably harvested medicinal plants, essential oils, and other non-timber forest products, while communities near protected areas receive 30 to 50 percent of the proceeds from park entry fees. Hariyo Ban is working with select forest user groups to help sustain and expand these benefits while guarding against misappropriation of community funds through participatory, public audits—an essential part of community conservation.

Nepal's human-centered approach to conservation offers important lessons for other countries where people and large wildlife coexist. As host of the South Asian Wildlife Network, Nepal has a unique opportunity to lead by example and through assistance to its peers in nearby wildlife strongholds like India, Bangladesh, and Bhutan. Globally, Nepal's ability to defy the odds on wildlife crime demonstrates the value of a comprehensive response to poaching and trafficking that relies on incentives and intelligence, involving both communities and crime fighters.

Taking Any Measure Necessary

Mobilization and monitoring yields conservation success in the Congo Basin

Since being designated the primary means of U.S. support to the 70-partner Congo Basin Forest Partnership in 2002, the Central Africa Regional Program for the Environment (CARPE) has served as an organizing force for conservation, leveraging more than $300 million from partners and other donors. CARPE initiated a third phase of programs in October 2013, focused on combating wildlife trafficking and tackling drivers of deforestation that impact eight high-biodiversity landscapes in the Democratic Republic of the Congo (DRC), the Republic of the Congo, and Rwanda. CARPE's work in the landscapes complements increased efforts to strengthen regional and national wildlife and forest policy and monitoring. The five-year landscape conservation component alone is leveraging $22 million from Norway's International Climate and Forest Initiative, which is directly programmed by USAID. This, combined with matching funds from implementing partners, leverages USAID's five-year commitment to field conservation into a minimum investment of $115 million.

CARPE III efforts to combat wildlife trafficking are focused on ivory trade and elephant poaching. The Spatial Monitoring and Resource Tool (SMART) for making ranger patrols more systematic and targeted was first brought to the region by USAID in 2013 and is being rolled out in every CARPE landscape. Partners are also working to improve judiciary capacity in major trafficking hubs and will extend to DRC a model of wildlife crime response and accountability proven in other countries in the region. A new partnership with *Commission des Forêts d'Afrique Centrale* (Central African Forests Commission, COMIFAC) will advance a regional law enforcement action plan endorsed by governments, which will reduce poaching of elephants and other wildlife by minimizing opportunities for corruption and giving park rangers, police, judiciary, and the media the training and incentives required to be effective.

USAID's comprehensive approach seeks to improve the security and economic well-being of communities living with wildlife. Surveys and research supported through CARPE have already improved the conservation outlook for great apes and led to the designation or expansion of dozens of protected areas, including Mayumba-Conkouati Transboundary Park (est. 2010) and Iyondji Community Bonobo Reserve (est. 2012). Partner surveys also helped alert the world to a 62 percent decline in forest elephants from 2004 to 2011 and led to targeted responses by field teams. For example, in November 2011, USAID supported training, rations, equipment, and logistical support in DRC for a government-led operation in Salonga National Park to capture elephant poachers detected by CARPE monitoring. The operation led to the arrest of more than 35 suspected poachers; today, elephants roam throughout the park once more. CARPE's wildlife protection and law enforcement programs directly support or complement similar efforts managed by the U.S. Fish and Wildlife Service.

CARPE also supports a proactive response to wildlife crime. Across the Congo Basin in 2013, at least 400 eco-guards received training in anti-poaching techniques, and numerous law enforcement agents and judiciary officials were updated on how to apply wildlife laws. Consequently, national and local authorities arrested and prosecuted more than 130 criminal poachers and seized dozens of weapons. Wildlife criminals are increasingly likely to face justice in the Republic of the Congo, where CARPE and the *Projet d'appui à l'Application de la Loi sur la Faune sauvage* (Project for the Application of Wildlife Law, PALF) are working together to train law enforcement officials to track and prosecute poachers, commercial bushmeat traders, and ivory traffickers. In 2013, 31 of 35 people arrested for elephant poaching in the country were transferred to prison for trial, including three military and high-level political figures.

The *Observatoire Satellital des Forêts d'Afrique Centrale* (OSFAC) provides training on collecting field data using GPS receivers at the University of Kinshasa. Most users of satellite data and geographic information systems in the Democratic Republic of the Congo have received OSFAC training. Photo: OSFAC

Forested Central Africa presents huge logistical challenges to the collection of reliable and current data on biodiversity status and threats. To meet the challenge, CARPE invested in strengthening the ability of local institutions to use satellite data and geographic information systems to inform conservation and management efforts. One of the first such investments was in the Kinshasa-based *Observatoire Satellital des Forêts d'Afrique Centrale* (Central African Forest Satellite Observatory, OSFAC). This non-governmental organization was created to produce reliable forest cover change information while building the capacity of conservation partners to use the latest satellite-derived tools and information. From 2005 through 2013, OSFAC trained more than 1,500 people in the region in geographic information and remote sensing applications, including a majority of those currently working with satellite data and mapping systems in DRC.

Two USAID partners, the University of Maryland and South Dakota State University, worked with OSFAC to produce the first analysis of forest cover change in the Congo Basin from 2000 to 2010. That analysis found that forest cover loss in CARPE landscapes was half the national average, on par with protected areas. Analyses like this are key reference documents for Central African countries developing baselines of forest carbon stocks and emissions for their national climate change mitigation programs.

To complement forest cover change monitoring across the Congo Basin, CARPE supported the development of national interactive forest atlases by World Resources Institute (WRI). The atlases show the location, extent, and ownership of logging concessions in relation to protected areas and other land uses and, through an analysis of satellite images and management plans, identify illegal cutting and roads. The rigorous atlas development process in DRC led to WRI playing a formal role in observing that country's forest title conversion process in 2009. WRI and the U.S. Forest Service ensured the involvement of local and indigenous populations in land-use planning, which helped set the groundwork for transparency, accountability, and sustainable management in the DRC forest sector. This result also demonstrates the value of spatial data to policy and management decisions, which remains a key approach for CARPE III.

Years of groundwork are paying off. Regional and national conservation actions are informed by the systems established by OSFAC, NASA, the University of Maryland, and WRI's Global Forest Watch. In Phase III, CARPE will embed the monitoring, verification, and valuation systems needed to manage and conserve forests and wildlife into governmental and civil society platforms. This process of capacity building, communication, and technology is empowering central Africans to safeguard their extraordinary natural heritage.

Strength in Diversity in the Amazon

Well-managed indigenous territories, valued protected areas, and supportive
resource management policies combine to conserve the world's largest tropical forest

The Amazon Basin is an ecological and cultural tapestry, home to spectacular biodiversity and tens of millions of people, including hundreds of indigenous groups. To address threats to the world's largest watershed and improve the lives of its multiple stewards, USAID conservation programs in Brazil, Colombia, Ecuador, and Peru support a diverse array of approaches that are both targeted and connected.

Economies in this region are growing rapidly, and infrastructure and mining pose direct and indirect threats to the environment. Tackling these challenges requires better land-management practices and policies in support of key conservation actors and areas. Three approaches supported by USAID country and regional missions are having an impact, especially when applied together: (1) improving and scaling up conservation practices and territorial management by indigenous peoples, (2) expanding constituencies for protected areas, and (3) supporting these actions through data-driven policy.

Conserving indigenous territories

Nearly a quarter of the Amazon Basin is designated as indigenous territory. USAID supports dozens of different ethnic groups to be better stewards of the forests and rivers they call home, often helping them create conservation areas inside their reserves. Through land-use planning, technical training in mapping, and effective engagement in public forums, participating groups gain stronger tenure security and assert natural resource management rights.

To encourage greater local participation in conservation, USAID works to secure rights to access information and legal services. In Peru, radio programs now inform indigenous peoples of their environmental rights and legislation relating to pollution, illegal hunting and logging, natural resource management, and trafficking of forest products, among other topics. In Ecuador, the *Linea Verde* (Green Line) offers legal consultations by telephone on environmental issues in the country,

A Cofan ranger, left, and Marcelo Guevara of The Nature Conservancy, center, confer with William Lucitante, vice president of the Federation of the Cofan Nation, in Ecuador's Sucumbios province. Photo: Thomas J. Müller

helping users submit environmental claims to the appropriate department.

A generation ago, the *A'i* indigenous group of Ecuador—about 1,200 people better known as the Cofan—were unable to effectively participate in economic development discussions or defend their interest in conserving the forest and their way of life. The Cofan territory is nearly one million acres of tropical rainforest and therefore critical to national conservation strategies. After USAID-supported work to improve natural resource management in the territory, the Cofan now come to meetings ready to defend their interests with maps and tell the local mayor exactly where poachers or land grabbers are entering their land.

Expanding constituencies for parks
While strengthening the ability of local communities to manage and benefit from natural resources is critical to conserving wide-ranging wildlife and maintaining cultural and economic connections to nature, nationally designated protected areas remain a core part of any conservation strategy in South America.

At the Government of Brazil's request, USAID is helping boost public participation in conservation and the careful management of national parks. Building on prior work, partners are engaging civil society and business in protecting important areas of the country. For example, with USAID support, Brazilian conservation authorities visited national parks in the United States to inform plans to promote and manage higher visitation at national parks near World Cup cities in 2014.

In Peru, a comprehensive management program has maintained zero forest loss for 10 years in Cordillera Azul National Park, one of the nation's largest. Working with the local population and authorities in the park's buffer zone, USAID has contained the spread of illicit coca cultivation in a region once known as the "Coca Basin." There are also fewer conflicts, due to the participatory and peaceful nature of work with local populations adjacent to the area. In the park and its buffer zone, more than 3 million acres of forest have been conserved.

In Ecuador, USAID collaboration with the Ministry of Environment contributed to nine operational plans for protected areas on the coast, highlands, and Amazon. The replication of this methodology nationwide will have a lasting impact on how all 49 national protected areas are managed.

Supporting data-driven policy
Robust monitoring and reliable data on the status of natural resources, and activities that deplete them, are essential for making sound management and policy decisions. In this spirit, USAID assisted the Government of Peru with conducting a national forest inventory and developing a wildlife information system to monitor key species. The information collected will help overcome illegal logging and weak forest management, improve enforcement, and comply with obligations under the Convention on International Trade in Endangered Species.

Advances in technology often improve the quality of data and the efficiency of collecting it. In Brazil, a USAID-supported scientist helped the Agriculture Research Agency's Remote Sensing Lab develop forest carbon inventories through the use of LIDAR (Light Detection and Ranging) aerial images. This technology will allow the government to more accurately assess the amount of carbon stored in specific forested areas and better participate in voluntary carbon markets.

Investments in policies and forest regulations are paying off, especially in areas outside of indigenous territories and parks. In Ecuador, Colombia, and Peru, USAID support to local and regional governments to carry out forest monitoring and community-driven forest governance resulted in the reduction and/or sequestration of 930,880 metric tons of greenhouse gas emissions (CO_2 or equivalent). In Brazil, the addition of nearly 13,000 private properties to a national environmental licensing and monitoring system helps improve management of about 23 million acres of Amazon forest and prevents 6.4 million tons of emissions. Efforts like these, large and small, are cost effective and ensure that forests continue to serve the needs of local people, mitigate climate change globally, and provide habitat for millions of species.

USAID Funding for Biodiversity and Forestry, FY 2013

Operating Unit	FY 2013 Biodiversity Funding in US$	FY 2013 Forestry[1] Funding in US$	Fund[2] Type
Total Funding for All Operating Units	**$179,966,452**	**$141,744,908**	
Total Funding for Tropical Countries	$174,912,323	$139,189,097	
Sub-Saharan AFRICA			
Africa Regional	$1,910,866	$950,000	DA
Central Africa Regional	$21,736,097	$29,087,677	DA
East Africa Regional	$1,910,866	$0	DA
Southern Africa Regional	$2,627,440	$0	DA
West Africa Regional	$5,016,022	$5,913,184	DA
Ghana	$1,528,693	$0	DA
Kenya	$4,299,448	$600,000	DA
Liberia	$3,857,742	$3,323,000	ESF
Malawi	$1,910,866	$2,296,786	DA
Mozambique	$3,821,731	$750,000	DA
Rwanda	$1,910,866	$670,643	DA
South Sudan	$3,000,000	$0	ESF
Tanzania	$7,643,463	$880,000	DA
Uganda	$4,299,448	$0	DA
Zambia	$0	$4,902,504	DA
Africa Total	**$65,473,548**	**$49,373,794**	
ASIA			
Asia Regional	$1,910,866	$0	DA
Regional Development Mission for Asia	$9,076,612	$1,000,000	DA
Bangladesh	$5,733,000	$4,806,555	DA
Cambodia	$2,866,045	$2,941,050	DA
India	$0	$2,866,299	DA
Indonesia	$14,331,493	$17,211,180	DA
Nepal	$4,861,242	$1,910,866	DA
Philippines	$8,121,179	$0	DA
Vietnam	$0	$173,164	DA
Asia Total	**$46,900,437**	**$30,909,114**	

Operating Unit	FY 2013 Biodiversity Funding in US$	FY 2013 Forestry[1] Funding in US$	Fund[2] Type
EUROPE AND EURASIA			
Georgia	$192,887	$162,945	ESF
Europe and Eurasia Total	**$192,887**	**$162,945**	
LATIN AMERICA AND THE CARIBBEAN			
Latin America and the Caribbean Regional	$3,821,732	$1,300,000	DA
South America Regional	$9,551,271	$7,041,271	DA
Central America Regional	$2,866,299	$0	DA
Brazil	$9,551,271	$5,000,000	DA
Colombia	$6,486,000	$7,016,013	ESF
Ecuador	$5,732,597	$500,000	DA
Guatemala	$3,821,731	$4,120,898	DA
Haiti	$0	$2,000,000	ESF
Honduras	$3,344,015	$500,000	DA
Jamaica	$0	$850,000	DA
Mexico	$0	$6,573,246	DA
Peru	$4,777,164	$6,722,003	DA
Latin America and the Caribbean Total	**$49,952,080**	**$41,623,431**	
MIDDLE EAST			
Lebanon	$0	$482,000	ESF
Middle East Total	**$0**	**$482,000**	
CENTRAL BUREAUS			
Bureau for Economic Growth, Education, and Environment			
Forestry and Biodiversity Office	$15,099,500	$8,346,033	DA
Gender Equality and Women's Empowerment Office	$0	$200,000	DA
Global Climate Change Office and Coordinator	$0	$9,497,591	DA
Land Tenure and Resource Management Office	$1,950,000	$1,075,000	DA
Planning, Learning, and Coordination Office	$398,000	$75,000	DA
Central Bureaus Total	**$17,447,500**	**$19,193,624**	

[1] Nearly all forestry funding is from forest-focused climate change mitigation and biodiversity conservation investments.
[2] Funding is from one of two accounts: Development Assistance (DA) or Economic Support Funds (ESF).

Funding Overview

USAID FY 2013 funding for biodiversity and forestry activities, by region and operating unit (missions, regional programs, and bureaus), is summarized in the table on pages 14-15. *Forestry* is a funding attribution for any project that conserves or better manages forests, while *biodiversity* is a funding allocation to specific USAID operating units for actions designed to address threats to biodiversity in priority places.

International biodiversity conservation programs received $180 million in FY 2013 funding, supporting projects in nearly 50 countries. Approximately 56 percent of funds went to 11 high-priority countries and regions described as "Tier 1" in USAID's Biodiversity Policy, including Kenya, Indonesia, and countries in the Amazon and Congo basins. Approximately half of biodiversity funding was focused on tropical forests. All USAID biodiversity programs meet strict criteria to ensure that activities are strategic and accountable for achieving conservation outcomes in biologically significant areas (see www.usaid.gov/biodiversity/impact/requirements for more details). Programs apply and develop best practices in conservation, including rigorous monitoring and evaluation in support of adaptive management.

In addition to these direct biodiversity allocations, $30 million in FY 2013 funding for other priorities indirectly contributed to biodiversity conservation. For example, several climate change adaptation programs conserve coastal ecosystems like coral reefs and mangrove forests, and efforts to reduce carbon emissions from deforestation help conserve habitat for innumerable species.

USAID focused about $24 million in FY 2013 funds on combating wildlife trafficking, an increase over previous years due to heightened urgency. Agency partners work with law enforcement and the judiciary, resource managers, community organizations, and policymakers to prevent poaching of endangered species, reduce illegal trade in wildlife products, and curb the demand that drives poaching and trade. USAID has mobilized a rapid increase in the scale and sophistication of its response to

wildlife crime since 2012 and expects to apply about $40 million in FY 2014 funds to address this crisis.

In FY 2013, USAID forestry programming totaled $142 million in about 40 countries, of which $139 million was focused on tropical forests. More than 96 percent of forestry activities advanced biodiversity conservation or climate change mitigation objectives, using funds allocated to meet the congressional funding requirement for Biodiversity or the Sustainable Landscapes pillar (GCC-SL) of the Agency's Global Climate Change portfolio. This includes sustainable forest-management projects that improve local livelihoods and strengthen natural resource governance, as well as partnerships with producers and buyers of wood products to reduce illegal logging and timber trade. Forestry for other purposes, such as planting trees on hillsides in Haiti to stabilize soil and regulate water for agriculture, improving agricultural

productivity in Zambia to reduce pressure on forest land, and facilitating wholesale restoration of native forests in Lebanon, accounts for approximately $5.4 million of forestry activities.

FY 2013 funding applied to forestry programming was lower than in previous years (for example, $219 million in FY 2012) for a variety of reasons. The types of ecosystems conserved with biodiversity funds fluctuate as programs begin and end, and increased work to combat wildlife trafficking may have reduced forest-focused conservation activities. GCC-SL funding attributable to forestry has decreased in part because of changes in how data is collected. In addition, the scope of GCC-SL work was expanded in FY 2013 to include landscapes like farmlands, wetlands, and mangroves, resulting in a modest shift in funding to programs focused on emission reductions in non-forest areas.

In addition to programs, USAID manages two whole-of-government efforts related to forests. The Agency hosts the Tropical Forest Conservation Act Secretariat, managed in partnership with the Departments of State and Treasury, which has concluded 19 debt treatment agreements with 14 countries that will generate more than $326 million for tropical forest conservation. USAID also leads the Tropical Forest Alliance 2020 (TFA 2020), a public-private partnership to reduce the tropical deforestation associated with the sourcing of commodities such as palm oil, soy, beef, and paper.

U.S. Marks Five Years of Support for the Coral Triangle Initiative

Marine ecosystems generate goods and services valued by billions of people and are a major focus of USAID biodiversity investment. With 75 percent of coral species and 37 percent of reef fish species in just 1.6 percent of the surface of the world's oceans, the Coral Triangle region north of Australia is one of the highest priorities for conservation. Fishing is a major source of jobs and protein for the 363 million citizens of Indonesia, Malaysia, the Philippines, East Timor, Papua New Guinea, and the Solomon Islands, but destructive and unsustainable fishing practices, exacerbated by poor natural resource management and climate change, threaten the food security and economies of these nations. During five years of USAID support to the Coral Triangle Initiative, nearly 10,000 government, civil society, and community representatives have been trained in natural resources management, 50 million acres of biologically significant coastal and marine areas are better conserved (an area the size of South Dakota), and about 20 communities in five countries are managing their local marine resources. More importantly, the six-nation partnership has put in place a regional system of ocean governance that is transforming how marine biodiversity is conserved and managed in the region. For more information, visit: www.usaid.gov/news-information/frontlines/depleting-resources/sustaining-amazon-seas.

LEFT: Patrick Ketete, a surveyor for the Ministry of Fisheries of the Solomon Islands, interviews a vendor at the Honiara main market to develop the *Happy Fish Happy People* mobile app, part of USAID's support to the Coral Triangle Initiative. Photo: USAID CTSP/Tory Read

BACK COVER: A young fisherman in Timor-Leste. Photo: USAID Coral Triangle Support Program/Matthew Abbot

U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, DC 20523
Tel. 202–712–0000
Fax. 202–216–3524
www.usaid.gov/biodiversity