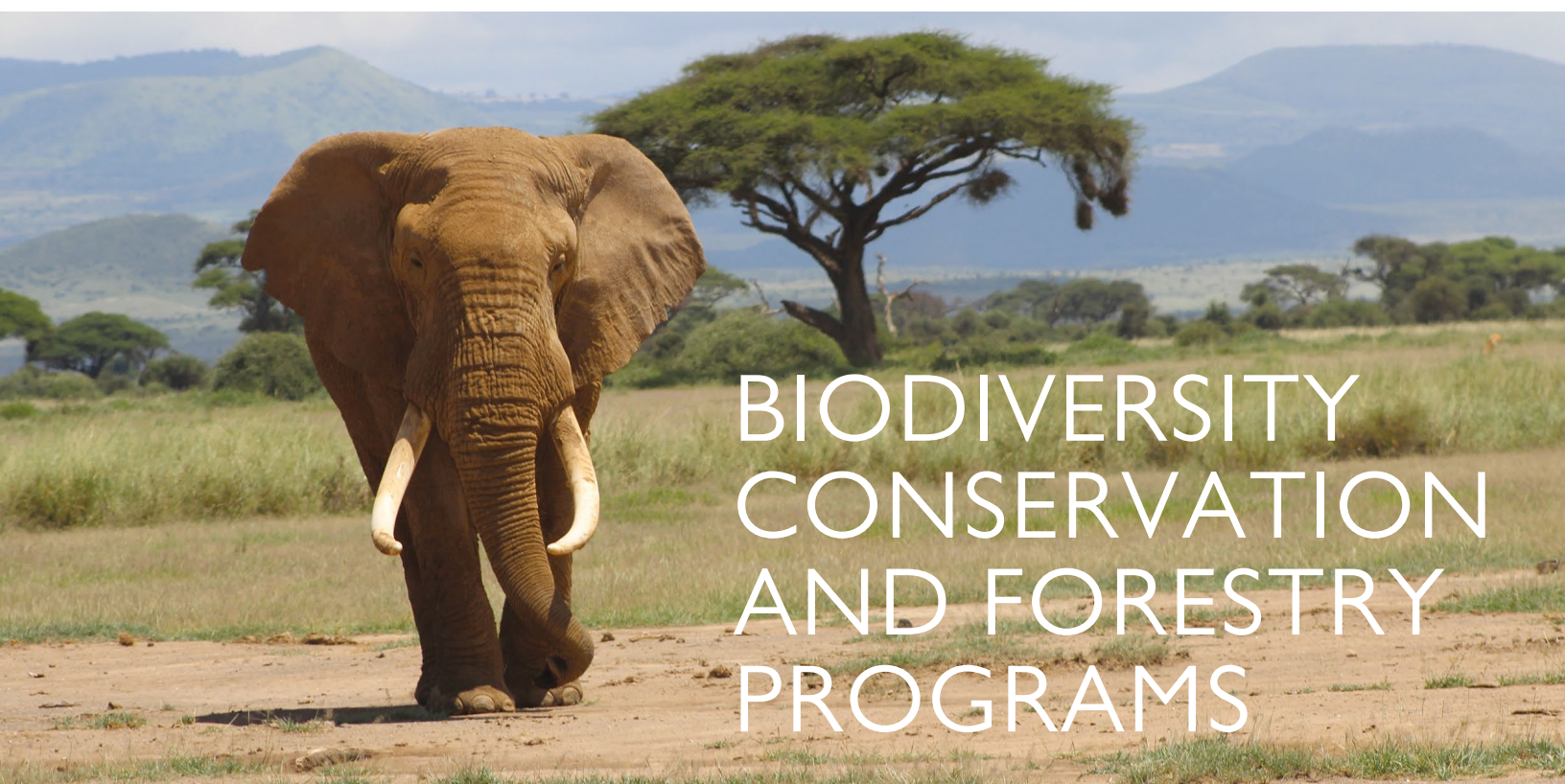




USAID
FROM THE AMERICAN PEOPLE



BIODIVERSITY CONSERVATION AND FORESTRY PROGRAMS

FISCAL YEAR 2016
RESULTS AND FUNDING

DNA DETECTIVE DOGS SAVING PANGOLINS



SARUAHA, CHITWAN, NEPAL: Athena, one of Conservation Canines' pack of conservation sniffer dogs, takes a break from the hard work of sniffing out pangolin scat. Her work is helping scientists develop a DNA reference map of the species, which will allow law enforcement officials to better target poaching hotspots. Good girl. Photo by Conservation Canines.

Sniffing her way through the forests of Nepal and Vietnam, Athena, an Australian Shepherd mix, and her trainer are working to save the world's most-trafficked mammal—the pangolin. Athena is part of a specialized team at Conservation Canines (CK9), a University of Washington (UW) based non-profit that rescues shelter dogs and puts their noses to work for wildlife conservation. While Athena may think her time in the field is just another day of play, she is actually creating a DNA reference map for the pangolin species.

Founded by Sgt. Barbara Davenport, master canine trainer with the Washington State Department of Corrections, and Dr. Sam Wasser, director of the Center for Conservation Biology at UW, CK9 trains dogs to locate scat from threatened and endangered species, including the pangolin. Graduate student H.J. Kim has been working with Athena and her handler to track pangolin scat in Nepal and Vietnam.

But it's not as simple as it may sound. Kim notes that the team has faced a few challenges in the field, including flat tires, food poisoning, road closures, and sneaky pangolins. The team discovered that pangolins

bury their scat, making it difficult to locate. "The dogs have been amazing!" she notes, "Without them, we would have had a very difficult time finding scat."

Back in the lab, the team extracts DNA from pangolin dung and adds to their map of pangolin genetics. When a large seizure of pangolins is discovered, they will be able to cross-reference the DNA from the seizure with the DNA reference map to identify poaching hotspots. By knowing these areas, enforcement agencies can more-efficiently target anti-poaching efforts to save endangered species when time is of the essence.

Kim and Wasser's team are one of four grand prize winners of the USAID-funded Wildlife Crime Tech Challenge, a competition that rewards innovative science and technology solutions that tackle specific aspects of wildlife trafficking – including detecting transit routes, collecting and using forensic evidence, and reducing consumer demand and corruption. The Tech Challenge is one way we are bringing new ideas to the fight against the illegal trafficking of terrestrial and marine wildlife.

BIODIVERSITY CONSERVATION AND FORESTRY PROGRAMS

2017 REPORT

ABOUT THIS REPORT

The U.S. Agency for International Development (USAID) submits this report pursuant to Section 118 of the Foreign Assistance Act of 1961 (FAA), as amended, on Tropical Forests. This report also provides information related to Section 119 of the FAA on Endangered Species.

Section 118 of the FAA notes that the “continuing and accelerated alteration, destruction, and loss of tropical forests in developing countries, which pose a serious threat to development and the environment, and requires 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 possible.”

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

Sections 118 and 119 require that USAID analyze threats to tropical forests and biodiversity prior to formulating country-development strategies to identify the specific conservation actions needed, and the extent to which actions taken meet the needs of tropical forests and biodiversity. At the project level, the design of forestry and biodiversity activities is based, in part, on these analyses.

FRONT COVER (TOP): CAPUL, NORTHERN SAMAR, PHILIPPINES: In the Philippines, 1.8 million people depend directly on fisheries for their livelihoods. USAID’s five-year ECOFISH program supported local communities and Governments in improved management of sustainable fisheries, resulting in more fish in project sites and more jobs for local people. Photo by Joel Policarpio.

FRONT COVER (BOTTOM): KILIMANJARO LANDSCAPE, TANZANIA: Elephants face serious threats from poaching and illegal wildlife trade. With partners on the ground, in the air and in the markets, USAID is working to combat wildlife trafficking and conserve elephants and many other species targeted for trade. Photo by Matthew Erdman/USAID.



GORONGOSA NATIONAL PARK, MOZAMBIQUE: History was recently made when six women graduated from a grueling training program and now serve as rangers in Gorongosa National Park. Photo by Gorongosa Restoration Project.

INTRODUCTION

USAID works to protect nature and natural resources in service of security, global prosperity, and self-reliance. Our forestry and biodiversity conservation programs help secure the livelihoods of some of the most vulnerable communities in the world, while conserving wildlife, biodiversity, and our shared global heritage.

Biodiversity conservation is much more than protecting natural spaces and endangered wildlife, it is also preserving our connection to nature and the wild.

USAID's work ensures that this natural heritage is passed down to future generations. In addition, good stewardship of natural resources is a lifeline for people in developing countries around the world. Healthy forests, coasts, mountains, and plains are the sole sources of food, medicine, and raw materials for homes and incomes for these communities.

Populations in developing countries that are healthy and thriving fuel global stability, and translate to greater security and prosperity for Americans at home.

SECURITY

USAID plays an important role in combating wildlife trafficking and environmental crime, including illegal fishing. We do this work alongside other U.S. Government Departments and Agencies, donors, non-governmental organizations and private-sector and local partners. In recent years, wildlife trafficking has grown into the fourth-most lucrative form of transnational organized crime, which threatens our national security and strategic interests by financing criminal groups that destabilize countries. Wildlife trafficking also undermines trade and investment, and spreads diseases that jeopardize food security and public health. USAID's comprehensive approach to combating wildlife trafficking strengthens law

enforcement from parks to ports, reduces consumer demand for illegal wildlife products, facilitates international cooperation and builds partnerships. Several innovative public-private collaborations help USAID tackle wildlife crime. For example, the Agency and the Monterey Bay Aquarium's Seafood Watch program are partnering to improve seafood traceability to help consumers trace their meal from "bait to plate," and enhance the sustainability of some of the world's most-productive fisheries in the Asia-Pacific region. USAID also works with companies in the transportation sector, including international airline carriers, to help the private sector address the threat of criminal networks that illegally move wildlife products around the world.

PROSPERITY AND SELF-RELIANCE

Worldwide, 1.6 billion people rely on forests for their livelihoods, and 2.6 billion people in developing countries depend on fish for protein and income.

Good conservation practices and local stewardship of resources help stabilize societies, and reduce extreme poverty. In Fiscal Year (FY) 2016, USAID supported more than 136,000 people around the world with training in sustainable natural-resources management and biodiversity conservation.

In Madagascar, a recent report found that, from 2010 to 2015, political instability and government mismanagement contributed to the illegal logging and export of hundreds of thousands of rosewood trees. The shrinking forest cover means that local communities have lost access to fresh water, wildlife, and forest resources on which they depend for their livelihoods. This report includes a profile of USAID's support for communities in patrolling, managing, and protecting their essential forests.

In Colombia, USAID works with a local cattle guild to conserve biodiversity in the forest and add value to local dairy farmers' products by marketing and promoting forest-friendly cheeses. This report includes a profile of *La Ruta del Queso*—the cheese route—and how it is benefiting both farmers and forests. This public-private partnership fuels economic development while conserving biodiversity.

USAID's long-term partnership with the Government of Mozambique and the Gorongosa Project offers additional examples. While restoring and conserving biodiversity in a naturally rich landscape, the restoration project applies a people-oriented, cross-sectoral approach that maximizes development benefits. Support for local farmers and health programs, and collaboration with governments, businesses, and communities have led to improved local livelihoods while helping wildlife thrive once again. Ten years after USAID began working with the project, elephant numbers are going up, and lions are making a rebound. At the same time, tens of thousands of people are living healthier, more-productive lives, and are proud to be neighbors and partners with the national park. In addition, six female scouts recently made history by becoming the first women rangers in Gorongosa National Park. Following an intensive 40-day, basic field-ranger training course, these courageous, strong women graduated alongside 35 men. Four of the six women are currently assigned to a special 12-member unit that will focus on strategic-conservation measures to reduce poaching of lions in the park. These women represent a changing tide in women's access to equal education and employment opportunities in the Gorongosa region.



GORONGOSA NATIONAL PARK, MOZAMBIQUE: Rosa Costomos Antonio Aniva, (standing 6th from the left), a member of Gorongosa's elite Carnivore Team, helped to sedate and place a GPS tracking collar on Rosa the lion. The collar will collect data that allows the team to better understand and save lions in the park. Photo by Gorongosa Project.



BAYAHIBE REEF, DOMINICAN REPUBLIC: Invasive lionfish are a great threat to the coral reef ecosystem in the Caribbean. As voracious hunters with no natural predators in the region, they feed on native fish, threatening the livelihoods of local fishers. USAID partners with The Nature Conservancy to support increased fishing of lionfish to decrease this threat. Photo by Albert Turi.

FOCUS ON RESULTS

USAID supports the conservation of priority sites, species, and natural systems by bolstering self-reliance in developing countries. Conservation helps ensure our shared global heritage, while helping areas become more stable in the face of threats from disasters, erosion of natural systems, and crime. In FY 2016, USAID field conservation programs **improved natural-resource management in highly biodiverse areas across more than 57 million hectares**, an area about the size of Colorado and Nevada combined. Investments target areas with critical biodiversity, in alignment with the Agency's policy.

In FY 2016, USAID programs in approximately 40 countries helped communities gain the capacity to manage and benefit from forests, wildlife, and fisheries; supported strategic efforts to stop criminal networks from engaging in wildlife crime by protecting wildlife, detecting transit routes, and decreasing demand; and conserved wildlife and natural resources through improved operation of national parks and reserves. As a result of USAID assistance, more than 1.5 million people have more income, better jobs, and other economic gains through sustainable natural resource

management and biodiversity conservation. Millions more benefit indirectly from biodiversity and the natural services it provides.

USAID works around the world to foster private-sector engagement in partnerships, boosting local business and protecting unique biodiversity by unlocking the power of consumers to make pro-conservation choices.

Results from USAID funding around the world during FY 2016 appear by region on the following pages.

LATIN AMERICA AND CARIBBEAN

1 In **Guatemala**, USAID helped to generate more than \$29 million in sales of sustainable timber and non-timber forest products that created approximately 3,000 jobs. Sales relationships are developed with environmentally conscious businesses in the United States, Europe and Japan for items such as flooring, furniture, and guitar necks. The sales of non-timber forest products, such as xate palm, have been particularly important in generating income and employment for women. Funding of sustainable tourism operations has also generated income and employment for women.

2 As of November 2016, USAID/**Guatemala** helped to maintain 476,415 hectares of biologically significant forest under Forest Stewardship Council certification within the community forest concessions of the Maya Biosphere Reserve. USAID has also financed training for fighting environmental crimes in the Reserve, which has led to improvements in the traditionally sluggish Guatemalan judicial system, such as more effective prosecutions.

3 In **Honduras**, USAID programs improved watershed-conservation in and around protected areas through better land-management, while also increasing access to water for more than 65,000 local people.

4 In **Haiti**, USAID support helped the Government formally join the Caribbean Challenge Initiative and move toward protecting at least 20 percent of its near-shore marine resources by the year 2020.

5 The Caribbean Biodiversity Fund negotiated its first partnership agreement with the National Conservation Trust Fund in the **Dominican Republic** (*Fondo MARENA*), which will trigger about \$450,000 in annual payments for marine-conservation projects.

6 The **Dominican Republic** pilot-tested its first gear-swap training to replace bottom-trawling nets for shrimp-fishing with improved nets, which will protect fish, improve fuel-efficiency, and protect deepwater ocean habitats.

7 In **Colombia**, Wayuu people supported by USAID-funded programs are protecting biodiversity while earning more money for their crops. Several communities that are working to protect tropical dry forests through improved land-use management have agreements with national restaurant chains for their products, which has resulted in greater earnings compared to local sales.

8 In **Perú**, more than 20 Cacataibo people have received training to monitor the amount of wood extracted from their forests and become stewards of their local forests, with the goal of preventing conflicts caused by illegal use of natural resources. Local communities also created their first General Plan of Forest Management, and an Annual Operational Plan for the use of 1,900 hectares of forests.

9 In **Brazil**, USAID has partnered with Google Earth to empower and mobilize indigenous communities to map their territories, and better manage their lands.



AFRICA

10 In **Ghana**, training funded by USAID for more than 200 officials from law enforcement and the legal system has improved their ability to oversee compliance, manage fisheries scientifically, and improve coastal planning and management.

11 In **Liberia**, USAID has helped create eight new community forests, with support from the Government of Liberia. Local communities will now manage 70,000 hectares of tropical forests in Grand Bassa and Nimba Counties.

12 In **Sénégal**, training financed by USAID for local fishing associations strengthened their administrative, organizational, and financial-management skills. Additional training in improved patrolling and inspection helps prevent illegal fishing in co-management areas.

13 In **Republic of Congo**, USAID launched a forest-disturbance alert system, which allows officials and managers to identify areas with deforestation, forest fires, and illegal logging. USAID conducted a joint visit with local forestry experts and the holders of logging concessions to determine the causes and impacts of recent fires, and to identify ways to counter them.

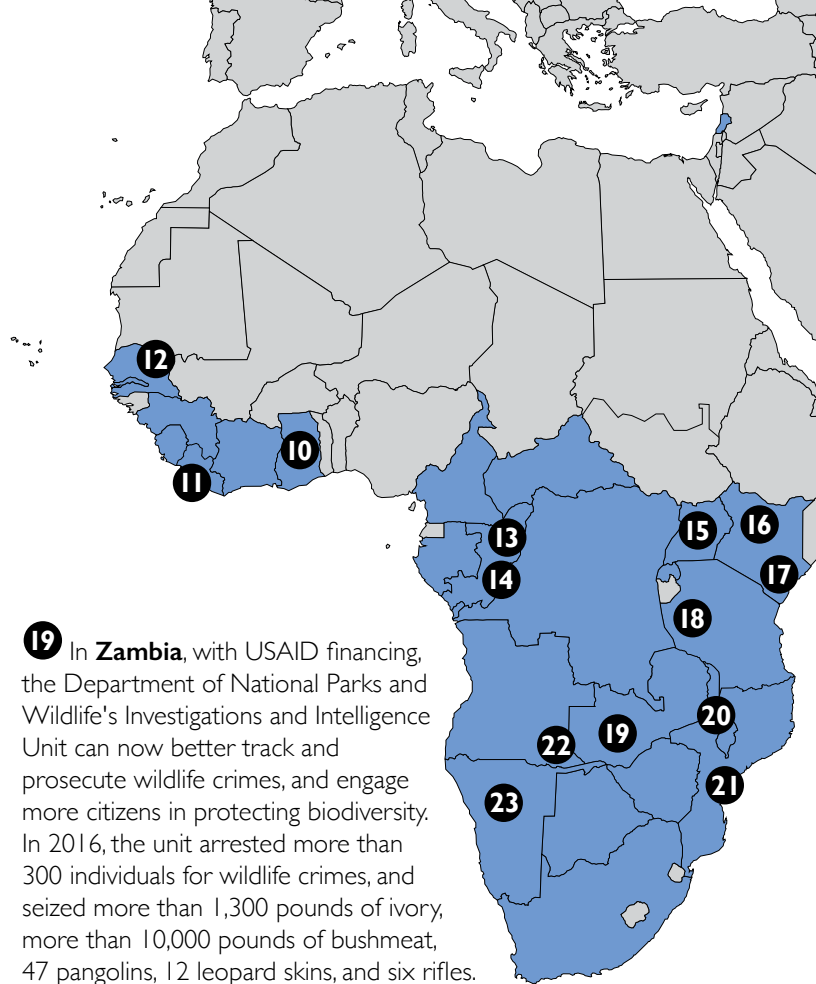
14 USAID funding for critical landscapes in **Democratic Republic of Congo** and **Republic of Congo** covers more than 14.7 million hectares—an area about the size of Illinois. Patrols in protected areas are now more frequent, regular, and extensive. In FY 2016, officials removed more than 9,600 snares, and destroyed 437 hunting camps.

15 **Uganda's** National Council for Higher Education accredited five new academic programs to support professionals in environmentally-sound oil development. Funded by USAID, the curriculum includes petroleum engineering, environmental-management, conservation, and wildlife- and natural-resources management, all essential for a region in which oil has been found in and around protected areas.

16 In **Kenya**, USAID funding for Northern Rangelands Trust community conservancies continues to benefit biodiversity and people alike. Investments by the private-sector and local governments generated more than \$850,000 in additional support in FY 2016, to benefit education and other development projects. More than 400,000 people earn more income through livestock, tourism, and women's enterprises. 1.3 million hectares of biologically significant land is better-managed, including six new conservancies in Turkana and West Pokot Counties.

17 In 2016, with USAID support, **Kenya** made history by burning 105 tons of ivory and 1.5 tons of rhino horn, the world's largest-single destruction of ivory stockpile.

18 In Western **Tanzania**, USAID funds biodiversity conservation in the Gombe-Masito-Ugalla landscape across more than 750,000 hectares, including 52 forest reserves, 35 school environmental clubs, 35 tree nurseries, 100 organic coffee farms, and other community enterprises.



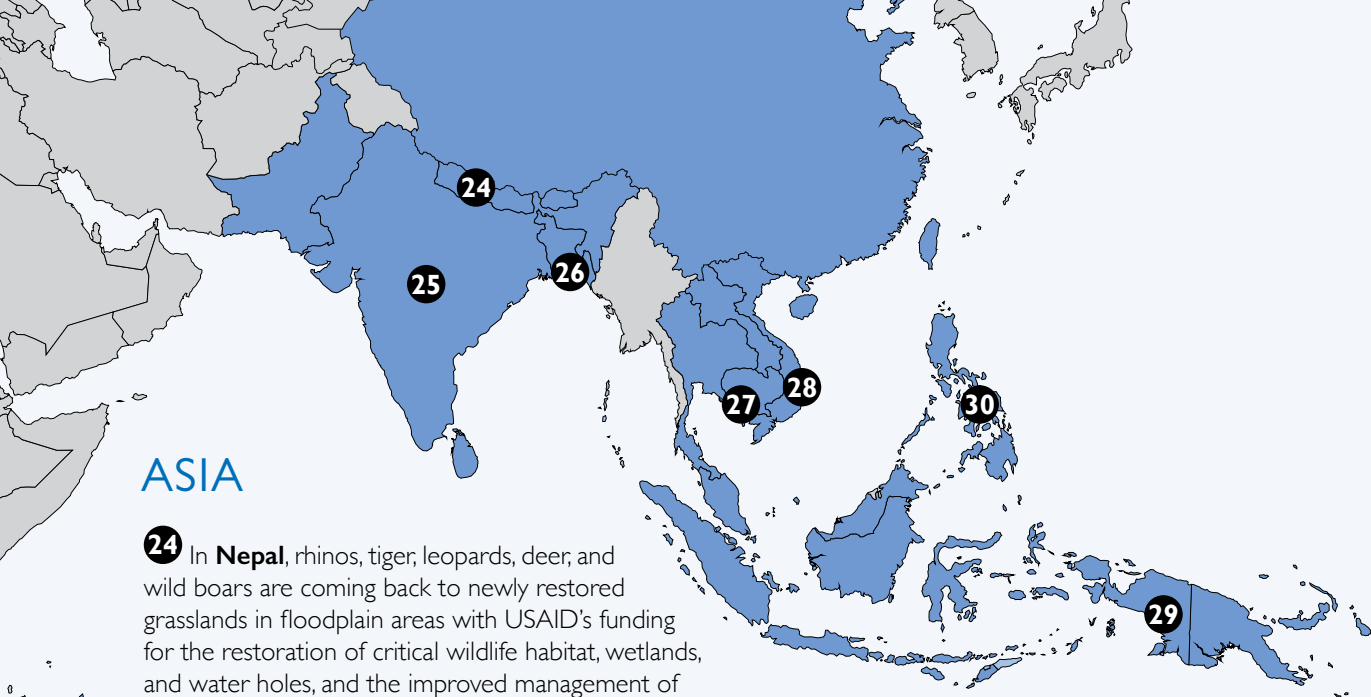
19 In **Zambia**, with USAID financing, the Department of National Parks and Wildlife's Investigations and Intelligence Unit can now better track and prosecute wildlife crimes, and engage more citizens in protecting biodiversity. In 2016, the unit arrested more than 300 individuals for wildlife crimes, and seized more than 1,300 pounds of ivory, more than 10,000 pounds of bushmeat, 47 pangolins, 12 leopard skins, and six rifles.

20 The Government of **Malawi** committed to decentralize its management of fisheries to support freshwater fisheries and reduce illegal fishing and trafficking. With USAID funding, local communities completed 186 management plans, and established fish sanctuaries that cover 330 hectares of important fish-breeding habitats. Communities and the Government of Malawi are working together to enforce fish-replenishment zones, and to end the misuse of mosquito bed nets for fishing.

21 In **Mozambique**, USAID is helping restore and protect the Gorongosa Park landscape, where people and wildlife suffered during the country's long civil war. In and around the park, wildlife populations are rebounding, and local communities have more jobs, better education, and improved livelihoods. Training for park scouts has led to 322 prosecutions and 185 convictions for wildlife crimes in the area.

22 In the Okavango Delta, USAID funded comprehensive management plans for the newly created Luengue-Luiana and Mavina National Parks in southeast **Angola**. The plans will bring jobs to the 12,000 people in the area, and improve the management of more than 6.8 million hectares of important habitat—an area larger than West Virginia.

23 Together with civil society in **Namibia**, USAID improved the governance and natural-resources management of six conservancies that cover 156,600 hectares in the Zambezi Region. More than 4,000 community members increased their income from biodiversity in FY 2016. Additionally, the Balywera and Bamunu conservancies now directly benefit from entrance fees paid by visitors.



ASIA

24 In **Nepal**, rhinos, tiger, leopards, deer, and wild boars are coming back to newly restored grasslands in floodplain areas with USAID's funding for the restoration of critical wildlife habitat, wetlands, and water holes, and the improved management of community forests. The number of adult tigers in the Terai increased from 121 in 2008 to 198 in 2013, and the rhino population increased from 534 in 2011 to 646 in 2015.

25 The USAID-funded Wildlife Conservation Trust conducted an extensive camera-trapping survey outside of protected areas in the Central Indian landscape, home to more than half of **India's** tigers, and identified important tiger corridors. The Government of India has since taken steps to protect one forest block to secure a corridor. The Trust also supports anti-poaching units and rapid-response teams by providing critical supplies and health care for front-line staff and their families so they stay healthy for patrolling.

26 People and wildlife living in coastal **Bangladesh** rely on mangrove forests for protection from disasters, and for shelter, food, and income. In FY 2016, USAID helped improve the management of more than 660,000 hectares of mangrove forest and wetlands in the Sundarbans, Chittagong and Sylhet regions. USAID-supported communities planted more than 850,000 trees on public and private lands to restore ecosystems and wildlife habitat in the Sundarbans, which has an important tiger population.

27 The Government of **Cambodia** designated more than 430,000 hectares—an area nearly the size of the Grand Canyon—as the Prey Lang Wildlife Sanctuary. This followed USAID-financed efforts to amplify the voices of forest communities, civil society, and youth groups who were advocating for the forest's protection. Moreover, the Government is now recognizing tenure rights for community forest lands, and communities are empowered to protect the forest lands on which they rely for their livelihoods.

28 USAID worked with relevant Government Ministries, such as the Ministry of Justice, and local organizations in **Vietnam** to reform laws and regulations on wildlife trafficking, and to strengthen law-enforcement capacity and compliance. International experts reviewed prosecution procedures for wildlife crime cases to identify obstacles that were hindering prosecutions.

29 In **Indonesia's** Cyclops Nature Reserve landscape, USAID funded the agreement that gives communities the right to manage buffer zones around the reserve collaboratively – which protects their livelihoods and allows them to take action against illegal logging and wildlife crime.

30 With USAID funding, the Government of the **Philippines** now has nearly 320,000 hectares of watershed and protected areas under improved conservation and management. On the coasts, a maritime crime hotline has generated 3,000 reports in six months, and led to 25 arrests for wildlife contraband worth more than \$100,000.

GLOBAL RESULTS

31 In FY 2016, Asia's Regional Response to Endangered Species Trafficking (ARREST) took stock of USAID's regional efforts to counter wildlife trafficking, and found that over the past seven years, these programs have contributed to the recovery of more than two million live animals, and a ten-fold increase in law-enforcement actions, including 1,300 arrests.

32 USAID funding to INTERPOL helped South Asian Governments draft their founding statute for the South Asia Wildlife Enforcement Network, endorsed by five countries (Sri Lanka, India, Nepal, Pakistan, and Bangladesh), which makes it a legal and official intergovernmental organization.

33 USAID partner TRAFFIC convened leading experts from business, government, non-governmental organizations (NGOs), and research institutions to identify critical strategies for reducing the demand for illegal wildlife products. The findings helped to source and develop content for the Wildlife Consumer Behavior Change Toolkit, a single point of reference for organizations that are working to reduce demand for illegal wildlife products.



BEVOALAVO, MADAGASCAR: Pierre Sampilaly, Chief Patroller for the Mitsinjo community forestry group, records data on illegal logging, which he will report to local authorities for investigation. Photo by Natalie Bailey/USAID.



TACKLING ENVIRONMENTAL CRIME IN MADAGASCAR'S RAIN FORESTS

Pierre Sampilaly, Chief Patroller for the Mitsinjo community forestry group in Northeastern Madagascar, looks at the large tree lying at his feet. “This one was cut for the market,” he says. “This is not wood that you use in the village.”

Trees are critically important in communities such as Mitsinjo. The dense rainforests of Madagascar's Eastern Highlands collect and slowly release water essential for drinking, cooking, and washing, as well as for filling terraced ponds used to grow rice and raising fish. Around the world, 1.6 billion people rely on forests for their livelihoods. Protecting these resources from illegal logging and poaching also protects local communities' ability to raise their own food, and make their own income – key elements of self-reliance.

Residents of Mitsinjo and communities like it have been frustrated that outsiders have been taking their trees and other resources, as well as with the unresponsiveness of government authorities charged with protecting forests. Since a coup d'état

in 2009, poachers and traffickers have especially targeted rosewood and ebony species, highly valued in the furniture industry. Trees that took hundreds of years to grow to harvest size will not be replaced for generations, if ever. People in the way of these illegal loggers have been threatened, or worse. Affected communities have found it difficult to make their voices heard in larger towns, and in the national capital of Antananarivo, and to get the support they need from law-enforcement officials.

This dire situation is beginning to change. From 2013 to 2016, USAID funded a \$2.25 million program to empower communities, conserve forests, and give local people a voice at the national level. Partners helped villages and government authorities manage forest



BERENTY RESERVE, MADAGASCAR: Found nowhere else in the world, approximately 100 species of lemurs live in Madagascar. Lemurs are threatened by habitat-loss, illegal logging and bushmeat-hunting. Photo by A.G. Klei, USAID/Madagascar.

reserves and protected areas, worked to strengthen regional civil-society organizations, trained journalists to investigate and report on both crime and corruption, and developed the evidence to inform better policies and management practices. This comprehensive approach has enabled more accurate, immediate, and informed monitoring and enforcement of natural resources in three critical landscapes. Working in close collaboration with civil society and the Government, a coalition of NGOs, including the World Wildlife Fund, Conservation International, Wildlife Conservation Society, and TRAFFIC, implemented the program.

As Chief Patroller of the Mitsinjo community, Pierre Sampilahy is responsible for tracking and reporting violations of national laws and community rules. Thanks to USAID and its partners, Pierre and his team of five community scouts are better able to patrol and protect their forests. With training in law-enforcement monitoring, the patrol team regularly surveys their community forest to collect data on allowed community use of trees, illegal logging, and changes to the forest. When they discover a violation, such as the recently cut tree spotted by Pierre, they record the data, including a GPS point, and send a report to the proper Government authorities. This coordination allows relevant managers to respond in a targeted and timely manner to changes and new threats in the area.

Local communities are also now better-connected to regional and national civil-society advocates for forests and biodiversity. Those groups support local communities by elevating their concerns to regional and national decision-makers. Valencia Ranarivelo,

Project Coordinator for World Wildlife Fund, said, “The program opened many public forums for local people that didn’t exist before and now there is increasing transparency. We are working towards a more equitable system for local people and the natural resources they rely upon. Now communities in forest areas where we work are more connected, more capable and feel less isolated than before.”

Despite having lost more than 80 percent of its original forests, Madagascar is home to more than five percent of the world’s plant and animal species, and is a global priority for biodiversity conservation. USAID has played a key role in Madagascar by fostering government commitment and action for biodiversity in the 1990s and vastly expanding the area under protection in the 2000s. Following the coup d’etat in early 2009, political instability, government mismanagement, a lack of forest-operation controls, and unwillingness to penalize well-known traffickers meant the Government essentially lost control of timber resources. From 2010 to 2015, at least 350,000 trees were illegally felled inside protected areas, and at least 150,000 metric tons of logs were illegally exported to foreign destinations such as China, Malaysia, and Mauritius. The United States suspended most assistance after the coup, and only reinstated it in 2014 after a new President came into office following a relatively peaceful election. The State Department granted an exception to these sanctions so USAID could fund the efforts highlighted above, and also help document and stop the pillage of natural resources that are so important to local livelihoods and the national economy.



BELEN DE LOS ANDAQUIES, CAQUETA, COLOMBIA: Farmers such as Orlando Martínez live in one of the most biologically diverse landscapes in Colombia. USAID programs have trained farmers in sustainable farming practices that protect the forest while improving access to markets. Photo by USAID/Colombia.



LA RUTA DEL QUESO: A MARKET-BASED STRATEGY FOR CONSERVING COLOMBIA'S FOREST

Many people know you can only call sparkling wine “champagne” if the grapes are grown in the Champagne region of France and produced using specific practices. The unique geography, soils, and climate in the region contribute to the production of a fine wine long associated with the highest quality. Likewise, Colombia’s Caquetá region, which connects the high Andes to the Amazonian plains and is home to jaguars, tapirs, and spectacled bears, is known for its high-quality cheeses, now certified as “Queso Caquetá.”

Caquetá is part of the Andean Amazon Piedmont, one of the most biologically diverse, and most-threatened, landscapes in Colombia. Deforestation for cattle-ranching, the cultivation of coca, and timber-extraction threatens the forests that are critical for people, biodiversity, and wildlife. Local people depend on the balance of water, forests, and biodiversity to provide food, shelter, and clean drinking water.

Pacto Caquetá, the regional cattle guild, is helping protect the forest and improve local dairy farmers’ livelihoods. The guild helps farmers strengthen sustainable farming practices to help prevent additional clearing of forest. In addition, the guild works with farmers to restore forests on high slopes where cattle grazing had been taking place. In return for such improved farming practices, the guild helps

improve farmers' access to markets, which allows them to earn more income. This strategy promises to improve the lives of local communities while reducing pressure on Piedmont forests, which makes *Pacto Caquetá* a natural partner for USAID.

In 2013, with USAID funding, *Pacto Caquetá* launched a strategic plan to improve the dairy value chain: *La Ruta del Queso*, or “the Cheese Route.” As cheeses had the highest added-value for dairy products in the region, the guild saw an opportunity to produce and market forest-friendly cheese to raise farmers' incomes, while also protecting the region's biodiversity. Natural forests help maintain the pure water and fertile soil needed by Caquetá's Criollo cattle to produce milk that results in high-quality, delicious cheeses.

The Cheese Route begins at the 18 dairy farms that have committed to protecting the adjacent forests. *Pacto Caquetá* provides training in dairy-farming practices, including animal care and wellness, the safety and quality of milk, and environmental stewardship.

Next on the route are six local cheese factories that have earned the *Queso Caquetá* certification. This certification designates products not only that are made in the Caquetá region, but also that protect forests and water sources and uphold quality standards for food safety. *Pacto Caquetá* promotes these dairy products by highlighting the culture, identity, and customs of the region, and praising the dairy farmers' tenacity under difficult conditions.

The journey ends with consumers who buy *Queso Caquetá* cheeses at their local market or restaurant. Renowned chef Mark Rausch, who runs several award-winning restaurants in Colombia, now features *Queso Caquetá* in the “Anti-Deforestation Pizza” offered at his *Energía Gastronómica* restaurant. The dish highlights the value of the Amazon Piedmont forests, as well as the gains in the region's dairy farmers' quality of life.

Chef Rausch said of the approach, “In order to raise high quality cattle, we need to protect the environment. This project trains dairy farmers on both the sustainability of their land and the quality of their products.”

In addition to praising the region's forests, rivers and wildlife, Chef Rausch praised the people. “I believe that this is one of the important features of Colombia; to find such warmth, familiarity and affection in an area that has been so affected for decades by violence was what impressed me the most,” he said. “That's what would most motivate me to return: its people!”

Through this collaboration, local dairy farmers sold more than 665 kilograms of Caquetá cheeses, and more than 1,300 kilograms of butter, over approximately six months. The forests adjacent to the dairy farms in Caquetá are now better-protected and better-managed. Also, the amount of forest land under improved management has grown by 150 percent since 2013.

In Colombia and around the world, USAID works with local and private-sector partners to strengthen forest and biodiversity conservation linked with market opportunities for smallholder farmers like those in Caquetá. In a sign of confidence in Colombia's progress, Starbucks and Nespresso are beginning to source coffee from the Caquetá region in support of conservation efforts. USAID works around the world to foster private-sector engagement in partnerships, boosting local business and protecting unique biodiversity by unlocking the power of consumers to make pro-conservation choices.



BOGOTA, COLOMBIA: Anti-deforestation pizza, made with forest-friendly *Queso Caquetá* labeled cheese, is on the menu at Chef Mark Rausch's *Energía Gastronómica* restaurant. Photo by USAID/Colombia.



EASTERN FOREST COMPLEX, THAILAND: Jiraporn “May” Tharat is a member of Thailand’s elite ranger team, the “King of Tigers,” who protect the forest and combat wildlife trafficking. Photo by Molly Ferrill/Freeland.



ARREST: A MULTIFACETED APPROACH TO CURB THE TRAFFICKING OF WILDLIFE PRODUCTS

Demand for illegal wildlife products is decimating populations of endangered species around the world. A rhino is killed every seven hours; the animal’s numbers have declined 96 percent since 1970. During the past decade, 62 percent of African elephants have been lost, and fewer than 4,000 tigers now survive in the wild. The trade in wildlife products poses enormous challenges for wildlife populations, good governance, and security around the world. Organized criminal syndicates see wildlife as a lucrative commodity, and trade it as they do guns, drugs, and humans. USAID supports the U.S. Government’s comprehensive approach to combating wildlife trafficking by addressing multiple challenges simultaneously.

Since 2011, USAID’s Asia’s Regional Response to Endangered Species Trafficking (ARREST) program has worked with partners to leverage the private sector, reduce demand for wildlife products, and strengthen wildlife law-enforcement across Southeast Asia and China.

THE POWER OF PRIVATE SECTOR PARTNERSHIPS

As one facet of a comprehensive strategy to combat wildlife-trafficking through ARREST, USAID worked to curb the sales of these products through social media. Agency partner International Fund

for Animal Welfare (IFAW) collaborated with WeChat, the second-largest global social-media platform, to expose and remove thousands of listings of wildlife products from online groups.

“It is a win-win partnership,” said Kaitian Guo, Chairman of Tencent Charity Funds Council and Senior Vice President of Tencent, owner of WeChat. “It is a great collaboration of Tencent’s resources with conservation expertise. Tencent is committed to leading change in this Internet era in an ecologically-harmonious way.”

The campaign has suspended or closed 144 public accounts and 299 private accounts on WeChat, and removed around 75,000 prohibited listings. IFAW also worked with leading e-commerce platforms Alibaba and Taobao to make their marketplaces unavailable for the trade of wildlife parts and products. Bimonthly monitoring shows a sustained reduction of wildlife traded on these sites.

REACHING OUT FOR WILDLIFE

USAID also funded the launches of new public-service announcements (PSAs) about the wildlife trafficking crisis by partners Freeland and IFAW. They featured people such as Kong Saharat, one of the highest-profile entertainers in Thailand. In his video PSA, Saharat said, “What I feel when I see ivory being used in ornaments or jewelry, to beautify homes or people, is sadness and a sense of loss. There is a direct link between the products you buy and the number of elephants being killed for them.” Distributed across a variety of online platforms, and in high-visibility public areas, the key messages of these campaigns reached 40 million people a day, at their peak.

STRENGTHENING LAW-ENFORCEMENT

Partnerships and messaging to reduce demand cannot alone solve the wildlife trafficking crisis. Stopping criminal networks from trading in wildlife and wildlife products also requires strong laws, and their enforcement. **Over the past five years, the ARREST program has trained 2,300 officers from 14 countries across Asia, which has led to more than 1,300 arrests.**

Key training methodologies from the program are now part of training programs in Thailand, Indonesia, Vietnam, and other countries in the region, to ensure wildlife law-enforcement continues to grow stronger beyond the life of the project. USAID has also supported governments in their efforts to revise policies to better protect wildlife from illegal trade. For example, the Government of Vietnam is now revising its Penal Code to include stricter consequences for the illegal possession of wildlife and engaging in wildlife-trafficking.

SEEING RESULTS

Results indicate that USAID’s comprehensive approach to combating wildlife-trafficking is working. “The

number of Chinese consumers who claimed to have purchased ivory during the past 12 months declined from 44 to 33 percent according to post-campaign testing. This clearly shows that the campaigns are having an impact,” said Grace Ge Gabriel, IFAW’s Asia Regional Director. In Thailand, the percentage of people who report they intended to buy wildlife products in the future dropped from 11 percent to four percent following the campaign. And in Vietnam, only four percent of those surveyed intended to buy wildlife products in the future, down from 26 percent in baseline surveys.

USAID’S COMPREHENSIVE APPROACH TO COMBAT WILDLIFE TRAFFICKING

ARREST is one of many USAID-financed efforts to combat wildlife trafficking. USAID also funds activities to fight poaching, improve law-enforcement and prosecution, disrupt transit, and reduce consumer demand in Africa and Asia. With approximately \$67 million in FY 2016 funds, USAID invested in more than 65 projects in 25 countries. USAID is building on the progress made through the ARREST program to continue working to reduce demand, strengthen enforcement, and build partnerships to conserve wildlife.

Learn more about the USAID Asia’s Regional Response to Endangered Species Trafficking (ARREST) program and its success stories, highlights and toolkits here: <http://www.freeland.org/arrest/>



THAILAND: An outspoken advocate for elephants, Thailand’s national animal, Kong Saharat lent his voice to USAID’s ARREST program. A popular singer, actor, and television star, Saharat spoke out against wildlife trafficking, and urged people not to buy ivory products. Photo by FREELAND.

TABLE I

USAID FY 2016 FUNDING FOR BIODIVERSITY, COMBATING WILDLIFE-TRAFFICKING, AND FORESTRY

OPERATING UNIT	FY 2016 BIODIVERSITY FUNDING IN US\$	FY 2016 COMBATING WILDLIFE TRAFFICKING FUNDING US\$ ¹	FY 2016 FORESTRY FUNDING US\$ ²	FUND TYPE ³
Total Funding for All Operating Units	\$265,000,000	\$71,430,526	\$161,359,568	
Total Funding for Tropical Countries	\$260,000,000	\$70,180,526	\$156,026,778	
Total Funding for Biodiversity Tier-One Countries and Regions	\$149,300,000	\$40,964,626	\$100,201,342	
USAID SUB-SAHARAN AFRICA				
Africa Regional	\$3,000,000	\$350,000	\$400,000	DA
Central Africa Regional ⁴	\$39,500,000	\$19,928,268	\$38,203,226	DA
East Africa Regional	\$4,500,000	\$1,750,000	\$0	DA
Southern Africa Regional	\$8,000,000	\$6,125,000	\$0	DA
West Africa Regional	\$7,250,000	\$2,500,000	\$900,000	DA
Ghana	\$1,000,000	\$540,900	\$0	DA
Kenya	\$8,000,000	\$5,450,000	\$310,000	DA
Liberia	\$7,866,625	\$0	\$2,000,000	ESF
Madagascar	\$8,300,000	\$0	\$5,511,500	DA
Malawi	\$3,000,000	\$1,000,000	\$4,365,714	DA
Mali	\$0	\$0	\$500,000	DA
Mozambique	\$6,000,000	\$3,500,000	\$0	DA
Sénégal	\$2,000,000	\$0	\$0	DA
Somalia	\$1,000,000	\$0	\$0	ESF
Tanzania	\$11,400,000	\$4,500,000	\$400,000	DA
Uganda	\$4,500,000	\$500,000	\$650,000	DA
Zambia	\$3,000,000	\$2,000,000	\$5,500,000	DA
Sub-Saharan Africa Total	\$118,316,625	\$48,144,168	\$58,740,440	
USAID ASIA				
Asia Regional	\$1,750,000	\$700,000	\$365,000	DA
Regional Development Mission - Asia	\$12,000,000	\$5,075,000	\$0	DA
Bangladesh	\$6,000,000	\$850,000	\$6,845,000	DA
Cambodia	\$3,000,000	\$0	\$8,547,454	DA
India	\$0	\$0	\$990,000	DA
Indonesia	\$17,000,000	\$2,161,358	\$7,626,975	DA
Nepal	\$5,000,000	\$1,250,000	\$2,519,624	ESF
Philippines	\$10,000,000	\$1,350,000	\$4,877,026	DA
Vietnam	\$6,000,000	\$2,500,000	\$2,000,000	DA
Asia Total	\$60,750,000	\$13,886,358	\$33,771,079	
USAID MIDDLE EAST				
Lebanon	\$0	\$0	\$2,813,166	ESF-OCO
Middle East Total	\$0	\$0	\$2,813,166	

OPERATING UNIT	FY 2016 BIODIVERSITY FUNDING IN US\$	FY 2016 COMBATING WILDLIFE TRAFFICKING FUNDING US\$ ¹	FY 2016 FORESTRY FUNDING US\$ ²	FUND TYPE ³
USAID LATIN AMERICA AND THE CARIBBEAN				
Latin America and the Caribbean Regional	\$3,990,000	\$350,000	\$0	DA
Caribbean Development Program	\$4,000,000	\$0	\$0	DA
Central America Regional	\$1,710,000	\$0	\$250,000	ESF
South America Regional	\$10,000,000	\$0	\$11,030,000	DA
Brazil	\$10,500,000	\$0	\$10,500,000	DA
Colombia	\$9,000,000	\$0	\$11,418,865	ESF
Dominican Republic	\$0	\$0	\$240,000	DA
Guatemala ⁵	\$5,000,000	\$200,000	\$0	DA
Honduras	\$5,000,000	\$0	\$2,750,000	DA
México	\$0	\$0	\$6,500,000	ESF
Perú	\$7,600,000	\$0	\$8,323,750	ESF
Latin America and the Caribbean Total	\$56,800,000	\$550,000	\$51,012,615	
USAID CENTRAL BUREAUS				
Bureau for Economic Growth, Education, and Environment				
<i>Forestry and Biodiversity</i>	\$16,960,000	\$4,500,000	\$4,127,053	DA
<i>Global Climate Change</i>	\$0	\$0	\$4,765,220	DA
<i>Land and Urban</i>	\$500,000	\$0	\$629,995	DA
<i>Planning, Learning, and Coordination</i>	\$540,000	\$0	\$0	DA
Central Bureaus Total	\$18,000,000	\$4,500,000	\$9,522,268	
U.S. DEPARTMENT OF STATE				
Bureau of Oceans and International Environmental and Scientific Affairs	\$1,000,000	\$0	\$1,000,000	ESF
Bureau of East Asian and Pacific Affairs	\$133,375	\$0	\$0	ESF
U.S. Department of State Total	\$1,133,375	\$0	\$1,000,000	
USAID TRANSFERS TO U.S. GOVERNMENT PARTNERS				
U.S. Department of Agriculture (USDA), Forest Service ⁶	\$4,500,000	\$0	\$4,500,000	DA
U.S. Department of the Interior (DOI), Fish and Wildlife Service	\$5,500,000	\$4,350,000	\$0	DA
Other Funds Total	\$10,000,000	\$4,350,000	\$4,500,000	

■ Tier One Countries and Regions, as prioritized by USAID's Biodiversity Policy

¹ All Combating Wildlife Trafficking funding is from biodiversity investments.

² Nearly all forestry funding is from forest-focused climate-change-mitigation and biodiversity investments.

³ Funding is from one of three accounts: Development Assistance (DA), Economic Support Funds (ESF), or ESF-Overseas Contingency Operations (OCO).

⁴ Congress directed USAID to transfer \$17.5 million of funds allocated for the Central Africa Regional Program for the Environment (CARPE) to the U.S. Fish and Wildlife Service at Department of Interior for complementary activities in Central Africa.

⁵ USAID transferred \$1 million of the funds for Guatemala's biodiversity programming directly to Department of Interior to support the Maya Biosphere Reserve.

⁶ USAID transferred a total of \$5 million in biodiversity funds to the U.S. Forest Service at Department of Agriculture for activities in a variety of countries. Of the total, USAID obligated \$500,000 via 632(b) transfer, and \$4.5 million via 632(a) transfer.

FUNDING OVERVIEW

A summary of USAID's FY 2016 funding for biodiversity, combating wildlife trafficking, and forestry activities, by region and Operating Unit (Missions, regional programs and Bureaus), appears in Table I. The Agency allocates biodiversity funding to specific USAID Operating Units for activities that conserve biodiversity in priority places and integrate biodiversity and development. Funding to combat wildlife-trafficking is a subset of biodiversity funds that directly support efforts to prevent or reduce poaching and/or the illegal trade in wildlife, including terrestrial, freshwater, and marine species. Forestry is a funding attribution for any activity for the conservation and sustainable management of forests.

International biodiversity-conservation programs received \$265,000,000 in FY 2016 funding, which financed projects in 57 countries. Approximately 56 percent of these funds went to 12 high-priority countries and regions described as "Tier One" in USAID's Biodiversity Policy, including Indonesia, Tanzania, and some countries in the Amazon and Congo basins. All USAID biodiversity programs meet strict criteria to ensure the activities are strategic and the Agency is accountable for achieving conservation outcomes in biologically significant areas (see <https://www.usaid.gov/biodiversity/impact/requirements> for more details). Programs apply and develop best practices in conservation by using approaches that address major threats and drivers and include rigorous monitoring and evaluation in support of adaptive management.

In addition to these direct biodiversity allocations, more than \$32 million in USAID's FY 2016 funding indirectly contributed to biodiversity conservation. For example, sustainable forest-management, including climate-smart land-use planning, reduces emissions from deforestation and forest-degradation, and contributes to biodiversity conservation. Various USAID-funded programs manage and protect watersheds, preserve marine fisheries, and conserve mangrove forests.

Overall, USAID invested \$71.4 million in FY 2016 funds to combat wildlife-trafficking, and has increased its response to the problem five-fold since 2012

because of the urgency of the crisis. USAID and its partners work on a comprehensive strategy to strengthen law-enforcement from parks to ports, reduce consumer demand for illegal wildlife products, and build international cooperation and partnerships.

In FY 2016, USAID forestry programming totaled \$161 million in about 40 countries, \$156 million of which focused on tropical forests. The majority (94 percent) of forestry activities advanced biodiversity conservation or emissions-reduction objectives, with funds allocated to meet the Congressional requirement for spending on biodiversity or sustainable landscapes. This includes sustainable forest-management projects that promote mitigation through sustainable land-use practices, such as the development of low-emissions development plans, sustainable landscape-planning and climate-smart agriculture. Other forestry activities, including programs to increase resilience to the impacts of climate change, accounted for approximately \$9.3 million in USAID's forestry programming in FY 2016. These efforts include the conservation of forests and wetlands and urban-forestry activities.

In addition to financing programs, USAID manages two whole-of-government efforts related to forests. USAID hosts the Enterprise for the Americas Initiative and Tropical Forest Conservation Act Secretariat, managed in partnership with the Departments of State and Treasury. Through 2016, the U.S. Government has completed 20 Tropical Forest Conservation Act agreements and eight Enterprise for the Americas Initiative agreements with 18 countries. Together, these programs have generated or will generate, more than \$516 million to support activities to protect the environment and conserve tropical forests. USAID also leads the U.S. Government in the Tropical Forest Alliance 2020 (TFA 2020), a public-private partnership to reduce the deforestation associated with the sourcing of commodities such as palm oil, soy, beef, and paper. In FY 2016, USAID was a Steering Committee lead during the transition of the TFA 2020 Secretariat to the World Economic Forum. TFA 2020 membership continues to expand, and to launch additional initiatives. One such USAID initiative implemented in Paraguay was the Global Development Alliance's Forest Conservation Agricultural Alliance, which is a multiple stakeholder effort to reduce deforestation from the cattle and soy sectors.



BLUEFIELDS BAY FISH SANCTUARY, JAMAICA: Protecting marine wildlife in the Bluefields Bay Fish Sanctuary helps local communities have access to bigger and higher-quality fish, which fetch higher prices. Photo by Kimberley Weller/USAID

PROTECTING FISH BRINGS JAMAICAN FISHERS BIG REWARDS

Along the south coast of Jamaica in the quiet fishing community of Bluefields rests the largest fish sanctuary in the country. “The sanctuary is what I consider a fish maternity ward,” says Venis Bryan, a game warden for Bluefields Bay Fishermen’s Friendly Society. “Fish come here to have their ‘babies,’ and it is my duty to protect them from harm.”

Bluefields is one of 17 official fish sanctuaries in Jamaica, where wardens work to prevent illegal fishing by patrolling the area, stopping violators, and seizing fish traps. The fry may be tiny, but protecting them has turned the dwindling fish population around, which has contributed to Jamaica’s food security and alleviated poverty. Since the establishment of the sanctuary in 2009, illegal fishing there is down from a high of 80 percent to 10 percent. The fishers are not only catching more fish – their hauls have increased five to eight pounds to 30 pounds per trip – but the fish are bigger and of higher quality, and thus fetch higher prices. In addition, sustainable fisheries offer more employment opportunities to people in the nearby communities. Because community members work together to protect the sanctuary, fish species that were considered extinct are returning; damaged coral reefs are being restored; and other wildlife, including birds and sea turtles, are thriving.

Venis Bryan is committed to keeping the marine wildlife safe, but she has also another plan for the Bluefields Bay: “Getting the Bay to ultimately become a tourist destination is our goal – where we have so many fish that it becomes a spectacle to showcase for others.”

Bluefields, together with marine-protected areas in four other countries, receive funding from the Caribbean Marine Biodiversity Program, a partnership between USAID; the Governments of Jamaica, Haiti, the Dominican Republic, Grenada and St. Vincent, and the Grenadines; The Nature Conservancy, and other local and international organizations.

BACK COVER, JOMORO DISTRICT, GHANA: Paddling through the lush and biodiverse Amansuri Wetland Complex. Photo by Glenn G. Page/SustainaMetrix



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