

A Results-Based Vision for Conservation in Central Africa



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Front and back cover: Mountain gorilla family group in Central Africa. Credit: Dirck Byler / USFWS

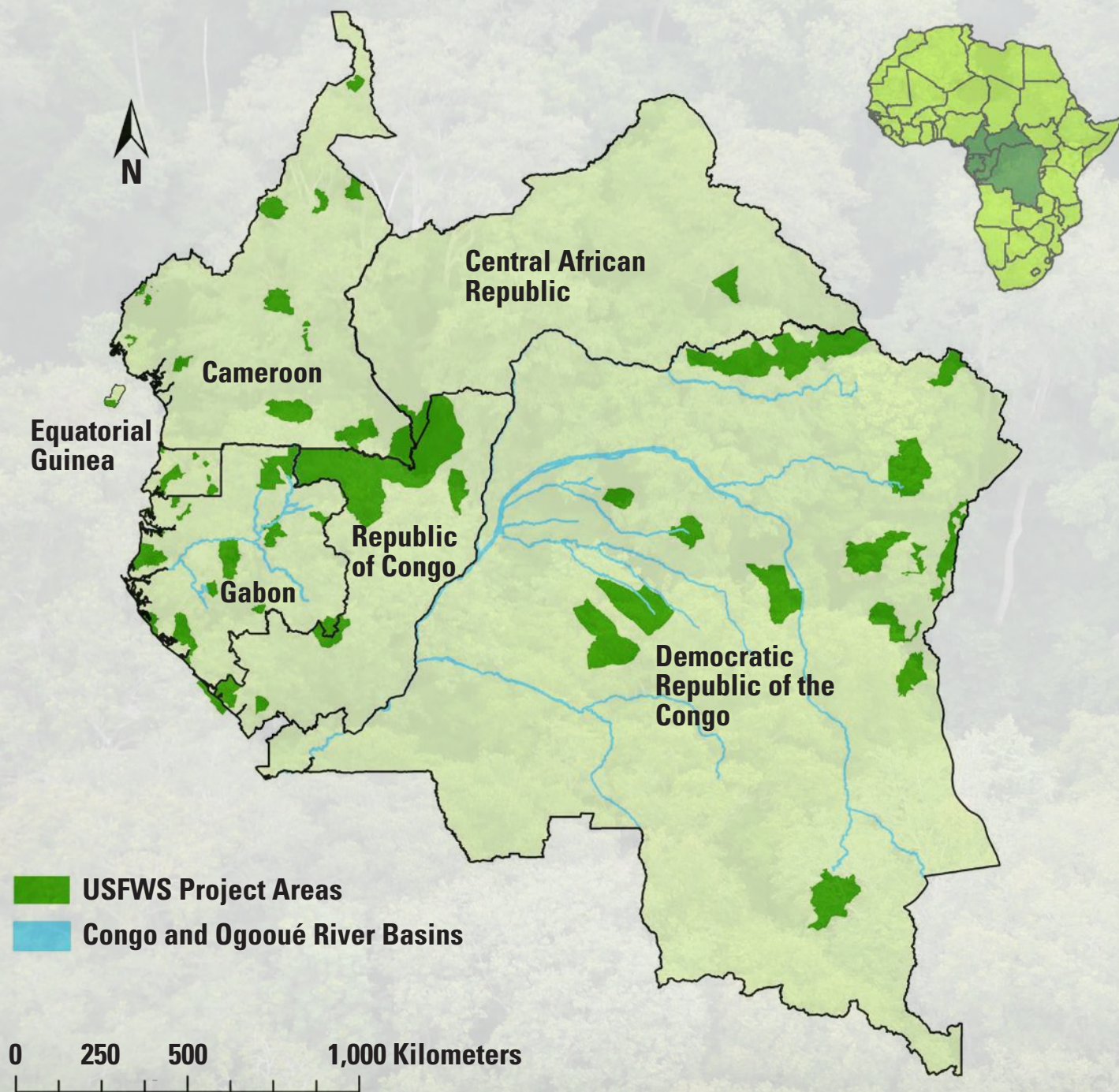




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Wildlife Areas in Central Africa with USFWS Investments, 2011-2014



Map credit: William Kanapaux / USFWS

A Vision for Central Africa

The U.S. Fish and Wildlife Service International Affairs program works with partners worldwide to conserve fish, wildlife, plants, and the habitats they depend on, and to maintain the integrity of ecological processes beyond our borders for present and future generations.

Central Africa contains some of the most iconic wildlife species on the planet. Elephants, great apes and a host of other awe-inspiring species have inhabited Central Africa for hundreds of thousands of years. Many of these species now face the threat of extinction in the near future. Global forces have accelerated this threat through well-organized poaching networks and uncontrolled resource extraction. Combined, these forces wipe out vulnerable wildlife populations and devastate habitats. As a global leader in wildlife conservation, USFWS seeks to:

- Conserve priority species and habitats across landscapes;
- Strengthen capacity, values and partnerships for long-term in-country species and habitat conservation; and
- Collaborate nationally and internationally through treaties, agreements, protocols and domestic laws to achieve shared conservation goals.

We look forward to working with our partners to achieve this vision.

A Strategic Framework for Central Africa

From exploitation to conservation: What's at stake?

Threats to Central African wildlife and habitats play out against a backdrop of under-regulated access to natural resources, growing market demand for wildlife and wildlife products, widespread poverty, political instability, corruption and a lack of capacity and financial resources within government institutions. USFWS has the capacity and expertise to collaborate with agencies and programs to overcome these major challenges. This results-based vision document has been developed to provide a cohesive framework for developing effective and long-lasting wildlife conservation programs in the region.

The challenges in Central Africa run deep. Following an active slave trade that began in the 1400s, European explorers entered Central Africa's vast equatorial forests via the Congo River in search of ivory and other riches. They encountered impenetrable swamps, dense forests, torrential rivers and malaria. By the 1800s, they had succeeded in developing a number of colonial and commercial interests to exploit the isolated region's natural resources.

In the wake of the ivory trade, a market in animal skins and other wildlife products soon followed. Resource extraction expanded to rubber, then diamonds, gold, timber, minerals and oil. Over the centuries, Central Africa's extractive industries have become a large part of the global economy.

Too often large-scale logging, petroleum exploration and mineral extraction destroy and alter Central African forest habitats that support dwindling wildlife populations. Road networks cut through once-remote forests, allowing people to penetrate previously inaccessible areas. Elephant poachers, who once had to walk for days through difficult and dangerous terrain, now easily enter on logging and mining roads. Poached wildlife and wildlife products reach growing markets in work camps, urban areas, major regional cities and points around the globe. Subsistence farmers take advantage of access to new lands by expanding their fields. This further degrades the primary forest and its ability to support wildlife.

USFWS benefits from three decades of experience working to conserve wildlife and habitats in Central Africa. Partners in other U.S. government agencies, in Central African host governments and at local and international non-governmental organizations (NGOs) bring considerable expertise to the table. This collective wisdom has contributed significantly to the development of this vision document and to the identification of the main threats that USFWS is best positioned to address. This document is intended as a basis for direction, discussion and concerted action among partners that can be adapted in response to opportunities, threats, global markets and conditions on the ground.

USFWS focuses on globally important populations of wildlife species that are at risk of extinction. In Central Africa, these include, but are not limited to:

- Elephant (*Loxodonta africana*), regionally endangered;*
- Great apes:
 - » Eastern gorilla (*Gorilla beringei*), endangered;
 - » Western gorilla (*G. gorilla*), critically endangered;
 - » Chimpanzee (*Pan troglodytes*), endangered;
 - » Bonobo (*P. paniscus*), endangered;
- Marine turtles:
 - » Leatherback (*Dermochelys coriacea*), vulnerable;
 - » Green (*Chelonia mydas*), endangered;
 - » Hawksbill (*Eretmochelys imbricata*), critically endangered;
 - » Olive Ridley (*Lepidochelys olivacea*), vulnerable.

* Classifications according to the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species. Version 2014.3. www.iucnredlist.org. Downloaded on 14 May 2015.

USFWS in Central Africa

Global conservation and the fight against wildlife trafficking have drawn attention at the highest levels of the U.S. government. During a visit to Tanzania in June 2013, President Barack Obama announced an Executive Order to enhance coordination of U.S. efforts to combat wildlife trafficking and assist foreign governments with capacity building. A National Strategy for Combating Wildlife Trafficking was subsequently published in February 2014. During a visit to Kenya in July 2015, President Obama announced a proposed rule that would ban the sale of virtually all ivory across U.S. state lines. This increased focus by U.S. leadership provides momentum for USFWS and other U.S. agency efforts in Central Africa.

The precedent for increased emphasis on wildlife and habitats in Central Africa was set by then-Secretary of State Colin Powell in 2002, when he spearheaded a multinational, multi-agency initiative that led to the formation of the Congo Basin Forest Partnership (CBFP). Now comprising about 70 partners, the CBFP provides a forum for consultation and collaboration that focuses on the ten countries that make up the *Commission des Forêts d'Afrique Centrale*, or Central African Forests Commission (COMIFAC): Burundi, Cameroon, the Republic of the Congo (Congo) Chad, Equatorial Guinea (EG), Gabon, Rwanda, the Central African Republic (CAR), the Democratic Republic of the Congo (DRC) and São Tomé and Príncipe.

Since 1996, the U.S. Agency for International Development (USAID) has made a major contribution to U.S. efforts in the Congo Basin through the Central Africa Regional Program for the Environment (CARPE). The primary objective of CARPE is to reduce the rate of forest

degradation and biodiversity loss in the Congo Basin by increasing capacity for natural resource management at local, national and regional levels. Since 2007, USFWS has played an increasingly important role in CARPE through a transfer of appropriated CARPE funds as specified by the U.S. Congress. As part of a whole-of-government approach, USFWS works with other federal agencies within the CARPE consortium to foster common understanding and approaches for solving critical conservation challenges in Central Africa.

Further, the expertise of USFWS in law enforcement and implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) provides a means for direct government-to-government assistance in developing capacity to fight wildlife trafficking in Central African countries.

Diverse expertise and approaches are necessary to reverse the decline in wildlife populations and the degradation of habitats. USFWS partners play key roles by:

- Strengthening capacity to monitor and manage wildlife;
- Improving forest management, forest mapping and land-use planning; and
- Building diplomatic bridges to enable conservation to succeed in a challenging context.

USFWS works with other U.S. agencies to develop strategies and implement actions on the ground while building institutional and individual capacity among our Central African partners. In addition to USAID/CARPE, our federal agency partners include the U.S. Department of State, the U.S. Forest Service (USFS), the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA) and the U.S. Department of Defense's Africa Command (AFRICOM).

Below: Logging truck in Central Africa. Credit: Richard Ruggiero/USFWS



Strategies for achieving conservation goals

USFWS conservation strategies in Central Africa:

- *Target key threats to wildlife and their habitats;*
- *Strengthen capacity and forge partnerships to implement on-the-ground conservation activities; and*
- *Build a better evidence base for conservation.*

USFWS actively supports on-the-ground efforts to build the conservation capacity of institutions and individuals in Central Africa. A well-managed network of protected areas is at the core of an effective wildlife conservation strategy. It can provide long-lasting results, in particular when protected areas are connected through a mosaic of corridors that complement both conservation and sustainable development goals.

Strengthening protected area networks in Central Africa requires overcoming two major challenges: poor governance of resource-rich areas and the exploitation of high-value natural resources, such as elephant ivory, by increasingly sophisticated criminal networks. Strong institutional capacity and effective management help prevent uncontrolled access to resources and increase the chances for conservation success.

USFWS works with government authorities and civil society partners to address wildlife security and management needs. Because USFWS is a governmental agency, it is able to work closely with African governments and help coordinate actions with NGO partners. In doing so, it strengthens willingness and buy-in to develop the skills and tools needed to protect and manage wildlife in-country.

The importance of strengthening capacity within African governments, local NGOs and communities cannot be overstated. USFWS places great emphasis on working with governments to tackle regional and national problems such as protected area management; the illegal bushmeat trade; elephant poaching and ivory trafficking; human-wildlife conflict; and unsustainable or environmentally damaging practices by extractive industries.

We seek to achieve these goals through three strategies, which are outlined in more detail in the following sections:

Target key threats to wildlife and their habitats:

USFWS takes a threat-based approach to determine its funding priorities and strategies for supporting and strengthening conservation projects in Central Africa. In annual Notices of Funding Opportunity, USFWS announces program priorities and desired results. These documents serve as the main references for Central African governmental agencies and other stakeholders who seek USFWS funding to protect and manage key areas and species.

Strengthen capacity and forge partnerships:

Long-term conservation success depends on capacity and political will. Developing both involves a process of building individual and institutional awareness of present and future threats and the work required to counteract them. Authorities and civil society groups need to collaborate to meet their conservation goals. USFWS provides support to strengthen the capacity of Central African governments and their partners to establish and sustain well-managed networks of protected areas.

Protected areas can include:

- National parks with well-defined boundaries and management plans;
- Buffer zones around parks that have a significant degree of management and monitoring;
- Multi-use forests that support local communities and regulated extractive industries; and
- Other designated areas that provide varying degrees of protection, such as special reserves.

In partnership with governments, donors, international NGOs and local stakeholders, USFWS funding provides support for numerous conservation efforts through its Africa Regional Program and three Multinational Species Conservation Funds authorized by Congress: the African Elephant Conservation Act of 1998, the Great Ape Conservation Act of 2000 and the Marine Turtle Conservation Act of 2004. All USFWS-supported projects and cooperative agreements receive their funding through one or more of these programs.

Build a better evidence base for conservation:

Effective strategies and good decisions need solid information provided by cost-effective monitoring and applied research. USFWS is committed to learning how to make its support for conservation more effective and efficient. USFWS believes that demonstrating effectiveness requires field projects to incorporate monitoring efforts in a cost-effective manner. This process guides USFWS and grantees to learn from, and improve upon, the activities that are implemented through our support. To that end, USFWS has published the [*Standard Measures of Effectiveness and Threats for Wildlife Conservation in Central Africa*](#) as guidance for USFWS applicants.

These three strategies build on a coordinated U.S. government effort that employs best practices for wildlife management. USFWS and its partner agencies continue to work with African governments and local stakeholders to improve the stewardship of Central Africa's globally important wildlife populations and forest ecosystems.

Opposite: Ba'aka trackers in Dzanga-Ndoki National Park, CAR.

Credit: Direk Byler / USFWS



Targeting Key Threats to Wildlife and their Habitats

Strategy: Prioritize USFWS support based on severity of threat to key species and protected areas, and address the urgent need to secure wildlife and their habitats from these threats.

Key threats targeted by USFWS in Central Africa:

- *Commercial bushmeat trade;*
- *Poaching elephants for ivory;*
- *Detrimental practices by extractive industries;*
- *Disease in great apes; and*
- *Marine turtle mortality.*

Over the last five years, USFWS received feedback from colleagues at U.S. agencies and NGOs on focal areas for USFWS in Central Africa. An internal strategic planning process subsequently identified five core priorities where USFWS can have the biggest impact to reduce the main threats facing wildlife in Central Africa.

Commercial bushmeat trade

In Central Africa, wild-sourced meat is commonly referred to as bushmeat. A wide range of wildlife species are consumed as bushmeat, including threatened and endangered animals such as gorillas, chimpanzees and other primates, forest elephants, crocodiles, pangolins and marine turtles. Bushmeat can either be consumed for subsistence or sold commercially. The commercial bushmeat trade has grown to massive proportions to satisfy demand from growing urban populations, with one million to three million metric tons of bushmeat consumed annually in the Congo Basin alone.

Unsustainable bushmeat hunting has been identified as the single greatest threat to Central African wildlife. This uncontrolled trade threatens wildlife populations and the food security of rural people. The spread of commercial bushmeat hunting into previously remote forests and the sheer number of urban consumers have led USFWS to prioritize projects aimed at reducing bushmeat consumption in urban markets and work camps.

The local extinction of species changes the functioning of forests, affecting ecosystem services and food security for rural communities.

Primates, duikers, pangolins and other relatively large-bodied species tend to be the most heavily exploited for bushmeat. Poachers target adult apes for meat and infants for the live pet trade. Ape populations are highly vulnerable to poaching pressure due to their low reproductive rates.

Adult sea turtles caught in fishing nets or captured on nesting beaches are also harvested and sold for their meat.

The local extinction of species changes the functioning of healthy ecosystems by disrupting pollination, seed dispersal, predator-prey relationships and other ecological processes. Bushmeat hunting and consumption are also linked to endangering human health via disease transmission between people and wildlife.

Objective:

Reduce the unsustainable harvest of wild animals for bushmeat and the live animal trade.

USFWS seeks the following results from its grants:

- Fewer incidents of commercial bushmeat hunting through:
 - » Decreased access to populations of protected wildlife;
 - » Higher risk of detection and arrest; and
 - » Reduced profitability for commercial hunters.
- Greater enforcement of wildlife laws in the field through:
 - » More tactical deployment of patrols;
 - » Greater detection and apprehension of illegal hunters; and
 - » Deterrence through increased monitoring of protected areas, logging and mining concessions, and transportation networks.
- Greater application of wildlife laws through the judicial system, including:
 - » Greater investigative capacity;
 - » More arrests and prosecutions of bushmeat traders; and
 - » Improved governance to support the legal process.
- Positive behavioral changes, such as:
 - » Elimination of bushmeat consumption in logging and other extractive industry camps;
 - » Reduced preference for bushmeat by urban consumers; and
 - » Decreased availability of bushmeat in hotels and restaurants.
- Adequate policies and penalties in place to deter transnational wildlife crime.

Opposite: Seizure of commercial bushmeat in Gabon.

Credit: Richard Ruggiero / USFWS



As large animals become scarce, hunters turn to rodents, bats and other smaller species, causing a rapid depletion of wildlife known as the Empty Forest Syndrome.

Logging and other industries have opened road access into previously remote forests, allowing the bushmeat trade to emerge as a thriving commercial activity in work camps and urban markets. Urban consumers dominate the bushmeat trade (approximately 10 to 15 million inhabitants of Central Africa live in cities and towns), and the preference for bushmeat is reinforced by associating its consumption with status and cultural practices. Such associations are particularly dangerous for rare and declining species, which can be viewed as desirable luxury items as they become more scarce and costly.

The removal of animals from their natural habitats to support the live animal trade has similar consequences for wildlife populations in Central Africa, but at a smaller scale. Rehabilitation and care of confiscated or rescued animals is costly and requires specific capacity and long-term commitment. Successful return to the wild is rare.

Although USFWS recognizes live capture as a threat to wildlife and understands that effective law enforcement will invariably result in confiscation of live animals, USFWS does not provide direct financial support for the operating costs of sanctuaries and rehabilitation centers. Rather, as with the bushmeat trade, USFWS supports efforts to build awareness, enforce wildlife laws, reduce consumer demand and conduct other activities that reduce the incentive to remove animals from the wild.

Poaching elephants for ivory

Recent news stories have revealed disturbing accounts of large-scale killings of elephants and massive quantities of illegal ivory shipments seized around the world. Today, Central Africa is targeted for ivory poaching due to the quality of the ivory; the ability of poachers to operate undetected in the region's dense forests; corruption; and the lack of technical and financial capacity of Central African law enforcement and wildlife agencies. Some carvers and collectors prize ivory from forest elephants due to its hardness and color. This preference puts added pressure on Central African elephant populations.

Historically, ivory played an important role in the exploration and exploitation of Central Africa. As explorers and commercial interests pushed further inland, massive amounts of ivory flowed out of the continent along slave-trading routes.

African elephants once numbered in the millions, but rampant poaching and habitat loss have led to catastrophic declines. In response to steep population losses in the 1970s and 1980s, countries that are a Party to CITES listed African elephants on Appendix I in 1990, effectively banning international commercial trade in elephant ivory. In the following years, investments in elephant protection increased, and demand for ivory decreased in Europe and the United States.

Below: Forest elephants in Loango National Park on the coast of Gabon. Credit: Richard Ruggiero / USFWS



However, in recent years, demand for ivory in Asian markets has grown, the price for ivory has skyrocketed worldwide, and poaching has resurged throughout Africa. In 2012, only 420,000-650,000 African elephants were estimated to remain. More recent surveys indicate that the number may actually be fewer than 400,000. The largest surviving populations are savanna elephants in East and Southern Africa. Forest elephants have dwindled: The 2012 estimate for Central Africa is 56,000 to 108,000 individuals.

Counting elephants in Central Africa is challenging. Forest elephants tend to have very low population densities across large landscapes. Nonetheless, repeated surveys have shown that forest elephants declined 62 percent between 2002 and 2011, and have disappeared from 30 percent of their previous range. The DRC, which once had Africa's largest forest elephant population, is believed to have lost more than 80 percent of its elephants since 1970. These losses can be attributed to warfare and instability. The proliferation of weapons, the lack of alternative income and the collapse of the rule of law have enabled poachers and traffickers to operate with impunity.

Insurgent groups and rebel militias in Central Africa have been reported to use the proceeds from elephant ivory and other high-value natural resources to fund their operations. For example, the Lord's Resistance Army, present in DRC and CAR, and the Janjaweed from Sudan are both documented to collect, consolidate and smuggle ivory in order to raise revenue. These groups have also been implicated in atrocities against local people and widespread destruction to wildlife and habitats.

Objective:

Reduce the unsustainable killing of elephants for their ivory.

USFWS seeks the following results from its grants:

- Reductions in the illegal killing of elephants, with particular emphasis on key populations and in protected areas;
- Greater awareness and political will among Central African government agencies and policy-makers for the protection of elephants and their habitats;
- Greater enforcement of wildlife laws prohibiting the killing of elephants, including:
 - » Improved detection of elephant poaching and ivory trafficking;
 - » Improved apprehension of elephant poachers in the field;
 - » More effective prosecution in the judicial system, with fines and jail time that deter poaching;
- Dismantling of ivory smuggling networks and reduction of illegal ivory entering the ivory trade;
- Improved reporting by Central African Range States to the CITES Monitoring of the Illegal Killing of Elephants (MIKE) and Elephant Trade Information System (ETIS) databases; and
- Elimination of illegal domestic ivory markets in Central Africa.



As the price of ivory on the black market increases, so does the incentive to poach. Poachers target the largest tusked animals first, but as big tuskers become harder to find, poachers become less selective and shoot small males, females and even young elephants.

Major factors linked to the decline of elephants are:

- Warfare;
- Proliferation of firearms;
- Decline in the rule of law;
- Corruption;
- Proximity to high density human settlements; and
- Expansion of roads into previously remote areas.

Positive factors linked to the survival of elephants include:

- Presence of park rangers; and
- Protected area status (formal designation as national park or other officially protected area).

After the international ban on commercial trade in ivory went into effect, some savanna elephant populations began recovering. However, with more recent increases in the demand for ivory in Asia and other international markets, elephants are currently suffering unsustainable losses. Observers report that many Central African forests are now devoid of elephants. Their absence will have a major impact on seed dispersal, tree composition and overall ecosystem function. The growing demand for ivory, the ease and facility of large-scale transport and the inability to secure elephant populations on the ground add up to a severe extinction threat for elephant populations in Central Africa.

Detrimental practices by extractive industries

Commercial logging

The commercial forestry sector in Central Africa largely engages in selective logging to extract species of high commercial value for international markets. Referred to by critics as high-grading, this controversial method involves selecting individual trees of particular species with high-export market value. The best trees available are cut, leaving behind trees of lesser quality. Recent studies of the large-scale, mechanized logging methods employed in Central Africa question the sustainability of these practices.

Selective mechanized logging threatens wildlife populations directly through fragmentation of forest habitat by the creation of new roads; displacement of existing wildlife populations; disruption of forest ecology; soil erosion; and loss of food availability for wildlife and people. The indirect threats may have an even greater impact. The creation of new logging roads allows poachers and slash-and-burn farmers to penetrate deeper into forests, depleting wildlife populations and causing further deforestation. New human settlements, work camps and roads are often located without concern for the ecological damage they will cause. A larger human population, lack of fresh alternative-protein sources

and inadequate enforcement of wildlife policies place even higher demand on wild-sourced meat.

Timber concessions occupy 30 to 45 percent of all remaining forested areas in the Congo Basin and contribute significant revenue and employment. In addition to deforestation for the commercial logging industry, Central African forests are also under threat by small-scale logging operations, agricultural expansion and infrastructure development.

Mineral extraction and petroleum exploration

Like mechanized forestry, large-scale industrial mining and petroleum exploration often lead to greater road access and dramatic changes to traditional communities and their land-use practices. The global demand for natural resources offers economic opportunities for Central Africa, providing jobs and foreign exchange. Extractive industries seek iron ore, manganese, tantalum, tin, gold, diamonds and oil. This poses considerable challenges for wildlife conservation and for local communities who depend on healthy forests, clean water, and stable wildlife populations for their livelihoods.

Objective:

Promote better management practices by extractive industries in wildlife areas.

USFWS seeks the following results from its grants:

- Enforcement of wildlife laws in extractive industry concessions, including:
 - » Greater enforcement of hunting laws; and
 - » Prohibited export of bushmeat and other illegal wildlife products from concessions.
- Adoption of an employee code of conduct, including:
 - » Bans on unauthorized hunting, purchase and transfer of wildlife and wildlife products; and
 - » Reduced disturbances to wildlife by miners, foresters and oil production teams.
- Planning by industrial camps, including:
 - » Temporary settlements for workers rather than permanent infrastructure; and
 - » Adequate food provisions to workers and their families to reduce incentives for poaching.
- Wildlife surveys to map and monitor the distribution and density of key wildlife populations in forest and mining concessions.
- Adoption of reduced-impact logging techniques by timber operations in the Congo Basin, including:
 - » Improved pre-harvest inventories and mapping of individual crop trees;
 - » Better planning of roads, skid trails and landings to reduce impacts on wildlife; and
 - » Controlled felling and bucking techniques.

Opposite: A skidder road, used by loggers to haul timber, cuts into an exploited forest in Central Africa.

Credit: Richard Ruggiero / USFWS



Unregulated extractive industries threaten Central African wildlife directly by degrading habitat and indirectly by creating roads that enable poaching and new human settlements.

The damaging effects of unregulated mining in Central Africa can be seen in Kahuzi-Biega National Park in eastern DRC. Mining for columbium-tantalite (coltan) destroyed significant amounts of gorilla habitat and is considered by some to be a primary motivation for war among rival militias. Both people and wildlife have suffered as a result of the DRC's difficulty in managing and controlling access to its mineral-rich forests, which make up about 80 percent of the world's known deposits of coltan, a metal ore widely used in the production of mobile phones and other electronic devices.

In northeastern Gabon, artisanal, low-impact panning for gold in Minkébé National Park grew exponentially over a four-year period into a large-scale operation that included more than 6,000 workers. Extensive bushmeat hunting, ivory poaching and wildlife trafficking drained the park of wildlife until the government intervened in 2011. A comparison of elephant surveys indicated that as many as 11,000 forest elephants were killed in less than ten years in Minkébé, with most of the mortality occurring in the three or four years prior to the government intervention.

In the Central African region, much of the oil exploration takes place offshore in the Gulf of Guinea, where it poses risks for marine habitats and aquatic animals that depend on acoustic communications, such as whales, dolphins and sea turtles. Oil exploration can also threaten species in terrestrial habitats and inland bodies of water. Recent acoustic exploration in Lake Edward in Virunga National Park, DRC, posed a risk to species such as the hippopotamus, whose numbers have been slowly increasing since a drastic 98 percent decline that began in the 1970s. The risk of oil spills and industrial waste pose additional potential threats to marine and freshwater life.

Disease in great apes

Great apes and humans share 95 percent of their genetic material. Consequently, apes and humans share many of the same infectious diseases. While these diseases have existed for millennia, the expansion of humans into wildlife-rich areas brings great apes and humans into closer proximity, which increases the potential for exchange of pathogens. Diseases commonly carried by humans, such as influenza, leprosy, and tuberculosis, are debilitating and often fatal for previously unexposed apes.

Gorillas and chimpanzees can suffer mortality rates of up to 95 percent from Ebola.

Emerging infectious diseases such as Ebola virus disease are a major cause of the decline in African great ape populations. In 2005, an Ebola outbreak killed an estimated 5,000 gorillas in an area of 1,042 square miles within Odzala-Koukoua National Park in Congo. IUCN in 2008 estimated that the western gorilla population had dropped 60 percent over the



Above: Researchers in Hazmat suits sample forest materials for Ebola in the Congo Basin. Credit: Wildlife Conservation Society

previous 20 to 25 years from a combination of poaching and Ebola. Gorillas and chimpanzees suffer a greater mortality rate (up to 95%) from Ebola than humans do (50-80%). The occurrence of Ebola is highly unpredictable, often with many years passing between documented outbreaks. Detection of Ebola in remote regions is also extremely difficult given the inaccessibility of large swathes of great ape habitat. A lack of local professionals trained in epidemiological investigation remains a limiting factor in mounting an effective conservation campaign to reduce the spread of Ebola and other pathogens.

Objective:

Reduce transmission of disease between humans and great apes.

USFWS seeks the following results from its grants:

- A better understanding of Ebola virus disease in Central African wildlife, including:
 - » The impact of Ebola on ape populations; and
 - » Transmission of Ebola among wildlife.
- Appropriate intervention strategies and critical control measures for apes;
- An expanded network of community-based wildlife disease surveillance to improve early-warning systems;
- Identification of great ape populations where ape vaccination could improve conservation prospects, such as near tourist and research sites; and
- Greater capacity of Central African veterinarians to provide diagnostics and treatment of great apes.

Opposite: Nesting leatherback sea turtle in Gabon's Pongara National Park. Credit: Richard Ruggiero / USFWS

Marine turtle mortality

Direct threats to Central African sea turtles occur across habitats, ranging from nesting beaches to the open seas. Logs, light pollution, garbage, construction and egg collection all harm nesting success. In Gabon, aerial surveys in 2011 found that more than 17,000 logs had washed up on nesting beaches. These logs impede movements of hatchlings and nesting females and can cause death by entrapment. Light pollution from coastal development can deter females from nesting and disorient hatchlings, causing many to die before reaching the ocean.

Egg collection is a serious threat on many beaches. At some nesting beaches, such as the 37 miles of nesting beach within Conkouati-Douli National Park in Congo, virtually all nests are poached in the absence of night patrols.

Foreign long-line vessels pose a growing risk to sea turtles and other marine life off the shores of Central Africa.

In coastal waters, fishery by-catch is a key source of mortality and can be caused by either commercial or artisanal methods. Commercial shrimp and fish trawlers are known to capture and drown significant numbers of sea turtles when they operate near nesting beaches and in foraging areas. Turtle excluder devices (TEDs) can reduce turtle captures by 95 percent but are not yet widely used in Central Africa. Long-line fishing represents another global threat to sea turtles. Although there are no data to estimate the impact of long-line fishing in Central Africa, foreign

long-line vessels increasingly pose a risk to sea turtles in this region. Gabon has recently banned long-line fishing in its coastal waters.

Artisanal gill net fishing is an important economic activity and food source for coastal communities. Nevertheless, it may result in high levels of sea turtle by-catch and deaths from drowning or deliberate hunting for consumption. Ocean pollution, including floating plastic garbage, presents an additional threat to marine turtles when ingested, leading to reduced fitness and increased mortality.

Objective:

Reduce threats to sea turtles at key nesting beaches and marine areas.

USFWS seeks the following results from its grants:

- Reduced egg collection at key nesting beaches;
- Elimination of deliberate capture of sea turtles for food;
- Removal of logs from nesting beaches, and establishment of policies to make logging companies responsible for log retention during river transport;
- Widespread use of TEDs in all trawlers in Central African coastal waters;
- Reduced sea turtle by-catch from commercial and large-scale artisanal fishing in coastal waters;
- Reduced mortality of sea turtles captured in artisanal gill-net fishing through release of accidentally caught turtles;
- Greater observer presence on long-line vessels and trawlers in coastal waters; and
- Minimized light pollution by using appropriate light management guidelines near nesting beaches.



Strengthening Capacity and Forging Partnerships

Strategy: Government-to-government agreements and international partnerships form the backbone of USFWS support for achieving results in Central Africa. The Multinational Species Conservation Funds, enacted by Congress, and the Africa Regional Program allow USFWS to respond quickly and adaptively to the threats facing some of Africa's most iconic species.

For nearly 30 years, USFWS has worked closely with foreign governments, multi-donor agencies, other U.S. government agencies, NGOs and civil society to ensure a strategic results-based approach to wildlife conservation and protected area management in Central Africa. USFWS support emphasizes direct action in the field and development of the necessary capacity to undertake long-term conservation programs. USFWS is helping a new generation of Central African conservationists attain resources and support for long-term success.

Government partnerships

Purpose:

Foster the willingness and ability of Central African governments to conserve and manage natural resources through USFWS cooperative agreements.

Government-to-government

USFWS is well-positioned to work with parallel agencies in other governments to support conservation and tackle issues involving wildlife security and management needs. USFWS strives to ensure that government partners have the capacity to effectively protect and manage their natural resources; that protected-area personnel can take action against threats to wildlife; and that political support among decision-makers positively influences wildlife policy and management.

A prime example is the relationship between USFWS and the Gabonese National Parks Agency, the *Agence Nationale des Parcs Nationaux* (ANPN). A memorandum of understanding (MOU) signed in April 2012 provides the framework for technical and financial support to help transform ANPN into a premier African parks agency. The MOU has led to several USFWS technical missions, including support to strengthen Gabon's capacity for implementing CITES.

Another example of government-to-government collaboration is the decade-long partnership between USFWS and Virunga National Park in DRC. USFWS has supported Virunga's efforts to rebuild itself following a complete collapse of the park as the result of war in DRC. USFWS has continued to support Virunga through dedicated funds for anti-poaching programs, alternative-energy efforts and park rangers. USFWS also helped to establish an initiative, Heroes of the Forest, to support the families of rangers who have given their lives in the line of duty to protect wildlife. Currently, USFWS is collaborating with Virunga on a cooperative agreement to support the operational capacity of 300 rangers while strengthening Virunga's long-term conservation strategy and financial sustainability.

Interagency

USFWS works with other U.S. government agencies that are active in the Congo Basin, in particular through CARPE, to develop strategies and implement actions on the ground for building capacity among Central African partners. In addition to USAID, partners include the U.S. Department of State, USFS, NASA, NOAA, AFRICOM, the National Science Foundation and the Smithsonian Institution. USFWS participates in regular communication among agencies to coordinate activities and share information.

In addition, USFWS regularly invites colleagues from U.S. government agencies to participate in proposal reviews in order to include their technical expertise and perspectives on potential projects; coordinate and amplify initiatives; and leverage additional support.

Below: A hippopotamus with calf grazes in Gabon's Loango National Park. Credit: William Kanapaux / USFWS

Opposite: Leaders of the Gabon Bleu program inspect a fishing boat off the Gabonese coast. Credit: William Kanapaux / USFWS



Gabon: A new model for cooperative agreements

Purpose:

Strengthen Gabon's network of protected areas, secure its wildlife populations and help transform ANPN into a premier national park agency.

Gabon represents Central Africa's greatest opportunity for comprehensive environmental conservation and management. Gabon faces significant conservation challenges from increasing demands for its natural resources, but it also possesses three crucial assets that define its potential for safeguarding its natural heritage:

- A solid awareness of current and future threats;
- The political will and determination to address those threats; and
- Existing momentum to build national and local capacity for conserving and managing natural systems.

From a global perspective, the basins of the Congo and Ogooué Rivers form the second-largest expanse of tropical forest on Earth. The enormous and productive ecosystems of the Ogooué Basin and Gabon's coastal environment on the Gulf of Guinea are among the most intact and diverse ecosystems in Africa. The region's forests are globally important as a reservoir for biodiversity and a sink for atmospheric carbon dioxide. Gabon's forests, which cover about 85 percent of the country, are among the richest in Africa in terms of botanical diversity (approximately 8,000 species of plants) and number of unique species. Likewise, the region's coast is one of the most productive marine ecosystems in the world, providing habitat and food to whales, dolphins, sea turtles, sharks and commercially important fish species such as tuna.

Gabon's low human population density (1.6 million people living mostly in urbanized areas) helps to minimize potential conflict with wildlife. The forests and waterways contained in its 13 national parks and two special reserves are mostly unexploited and undisturbed by human activity. The major exceptions are a recent epidemic of elephant poaching in northeast Gabon and illegal logging and fishing in other protected areas.



Threats to Gabon's biodiversity

Gabon faces the challenge of sustainably developing and diversifying its national economy, which historically has depended on petroleum production, forestry and extraction of key minerals such as manganese. Gabon's marine resources are under pressure from the regional depletion of fish stocks and the presence of modern, efficient fishing vessels from around the world in the Gulf of Guinea.

The rising demand for ivory in Asia, its escalating price on illegal markets and the severe depletion of elephant populations in other Central African countries has brought ivory poachers and organized trafficking networks to Gabon, which now contains more than half of the continent's forest elephant population. As Africa's forests continue to be exploited and degraded, as ivory and bushmeat hunting continue to erode wildlife populations, and as the world's appetite for fish protein grows, the pattern of over-exploitation observed in neighboring West Africa threatens to repeat itself in Gabon's forests, protected areas and aquatic and marine ecosystems.

Response to threats

In the face of these threats, Gabon has taken historic steps toward conserving its biological riches. In 2002, President Omar Bongo Ondimba began creating a network of 13 national parks covering more than 10 percent of the country. In 2007, Gabon established ANPN and adopted laws to formally define the park network. As an essential component in the national development and conservation concept known as Green Gabon (*Gabon Vert*), the parks represent the range of Gabon's extraordinary biological diversity and serve as refuges for its most important and endangered wildlife.

In December 2012, Gabon made a long-term commitment to the protection and management of marine ecosystems through the creation of Blue Gabon (*Gabon Bleu*). The program is developing a scientific basis for marine and

coastal management. In November 2014, the Gabonese government announced plans to create a network of 10 marine protected areas covering 23 percent of the country's territorial waters. These actions demonstrate Gabon's unprecedented political will to protect forests and marine environments from the negative effects of resource exploitation.

USFWS – ANPN cooperative agreement

Despite Gabon's demonstrated commitment to conservation, ANPN has been under-resourced, under-staffed and lacking in technical capacity. In April 2012, USFWS and ANPN first established an innovative cooperative agreement to target and reduce threats to Gabon's forest elephants, great apes, tropical forest habitats and marine ecosystems. This ambitious initiative works to address the rapidly escalating threats to protected areas, such as elephant poaching, while simultaneously enhancing the immediate- and long-term capacity of ANPN to effectively manage the national park network and adaptively respond to emerging conservation challenges.

This cooperative agreement, which is evaluated and revised through each annual funding cycle, establishes a unique, bilateral collaboration between ANPN and USFWS to address both institutional challenges and conservation threats to Gabon's national park network. The project builds a model for protected area management and advances collaboration with NGOs through appropriate support roles. The terms of this agreement are developed annually in discussions among USFWS, ANPN and representatives of international NGOs active in the region.

Although the cooperative agreement's goals and objectives provide immediate, tangible benefits, the agreement also serves as a model for collaboration between two governments, establishing a framework that could potentially be replicated in other Central African countries.

Below: ANPN rangers inspect a confiscated firearm. Credit: Richard Ruggiero / USFWS

Opposite: An ANPN ecoguard takes notes during a patrol in Gabon's Minkébé National Park. Credit: William Kanapaux / USFWS





Non-governmental partnerships

Purpose:

Work with international and local NGOs to support on-the-ground wildlife conservation in Central Africa, and coordinate with other donors to leverage USFWS support.

Multi-donor partnerships

USFWS coordinates resources and facilitates dialogue with other donors regarding important landscapes and wildlife conservation. By leveraging funding through multi-donor partnerships, USFWS is able to amplify its impact where it matters most.

USFWS has been an active member of the CARPE consortium from its onset. The collective experience and lessons learned by CARPE partners help shape on-the-ground wildlife conservation efforts and improve the prospects for conservation success through NGO and foreign government partners. CBFP meetings also provide a platform to coordinate and leverage activities among donors and partners working in Central Africa.

In Washington, DC, USFWS staff provides technical guidance to multilateral agencies, such as the Global Environment Facility and the World Bank, for their conservation initiatives in Central Africa. In the field, USFWS works with a range of partners and donors to strengthen and facilitate on-the-ground conservation. For example, USFWS partnered with the Arcus Foundation to convene a long-term strategic planning process with NGOs working to conserve bonobos in the remote forests of western DRC. The process resulted in new partnerships and strengthened activities in the field to more effectively conserve bonobos.

NGOs

USFWS partners with NGOs ranging in size from large international organizations to local community-based groups. These partnerships allow USFWS to focus on conservation issues at different geographic and thematic scales. Examples include outreach to reduce demand for bushmeat, ecotourism development with local communities, applied research and support for law enforcement in protected areas. Through enduring partnerships, USFWS seeks to facilitate dialogue, cultivate relationships, enable strategic planning, share learning, inspire innovation and provide technical and financial assistance.

Africa Regional Program

Purpose:

Support Central African nations to develop human and institutional capacity for wildlife conservation and management in and around protected areas, and secure wildlife and habitats facing immediate threats.

The Africa Regional Program supports projects that reduce poaching and other threats to wildlife; strengthen protected area management; provide training for emerging professionals at regional colleges and universities; engage decision-makers; and empower communities in all aspects of wildlife conservation and law enforcement.

The Africa Regional Program employs a two-pronged strategy to reverse the tide of wildlife trafficking, resource exploitation and habitat degradation in Central Africa:

- 1. Small, competitive grants for on-the-ground projects that respond to immediate threats; and

- 2. Long-term investments that focus on building internal capacity for effectively managing wildlife populations and their habitats.

This combined approach allows USFWS to support quick responses to immediate threats while providing support and technical assistance for achieving long-term results. In this way, USFWS plays an active role in shaping Central Africa’s conservation programs over time.

<i>Fiscal Year</i>	<i>USFWS Funds</i>	<i>Leveraged Funds</i>	<i>Number of Projects</i>
2014	\$8.5 million	\$8.5 million	28
2013	\$8.1 million	\$10.8 million	33
2012	\$3.0 million	\$2.9 million	7
2011	\$1.0 million	\$450,000	7

Table 1. Funds awarded by fiscal year to support projects in Central Africa under the Africa Regional Program.

Below: The MENTOR-FOREST Fellows learn about mangrove trees in Gabon. Credit: Lauriane Besse-Streit / USFWS



MENTOR-FOREST

Timber extraction occurs throughout the Congo Basin. Forests in Central African countries with limited management capacity are especially vulnerable to unsustainable logging practices that harm wildlife.

In Gabon, forestry faces the following issues: (1) insufficient information for decision-makers; (2) lack of models that link conservation strategies with development; (3) low capacity to study and train in forest management at the university level; and (4) lack of multi-disciplinary teams, partnerships and management tools to conduct effective forest stewardship.

MENTOR-FOREST (Mentoring for ENvironmental Training in Outreach and Resource conservation - FOrest Research Ecology and Stewardship Training) provided a multi-disciplinary team-training and problem-solving program through USFWS and ANPN. In this program, nine young professionals from Gabon and Congo formed teams to solve pressing threats in and around forested protected areas and earned a Master's degree at *Ecole Nationale des Eaux et Forêts* (ENEF) in Cap Estérias, Gabon.

The program's partners included USFS and USAID. The MENTOR approach combined:

- Coursework led by international and national experts;
- Personal guidance from mentors;
- Internships with NGOs and private businesses; and
- Team projects focused on improving forest-use policies.

Fellows gained skills and expertise to:

- Improve forest management through reduced-impact logging and private-sector partnerships;
- Design and implement innovative pilot programs;
- Reduce carbon emissions from deforestation and degradation;
- Address emerging diseases associated with non-sustainable forest stewardship; and
- Better understand forest ecology.

The MENTOR model is currently being replicated in two regional projects that will address threats to manatees and pangolins in Central Africa.



The MENTOR-FOREST program, the first of its kind in Central Africa, has successfully trained nine Fellows at the Master's level to build conservation capacity in the Congo Basin.

Heroes of the Forest

Effective wildlife conservation requires a well-trained and well-equipped corps of park rangers. Growth in wildlife trafficking and continuing instability in parts of Africa have led to a dramatic rise in park ranger deaths. The toll on rangers and their families has been devastating. In just 10 years, 140 rangers have been killed protecting Virunga National Park, in DRC. Rangers in the Central African countries of Cameroon, Chad, Congo and in other parks in DRC have also died in recent years in the line of duty.

The assault on rangers mirrors the significant increase in poaching pressure on African wildlife. Park rangers are often underpaid and inadequately equipped to confront these threats. Serious and often deadly engagements with well-armed poachers from organized networks seem to increase by the day.

Through the Heroes of the Forest program, USFWS seeks to recognize park rangers who have been killed in action while protecting wildlife of global importance. This initiative increases awareness of those who have made the ultimate sacrifice to protect some of the world's most important wildlife species and habitats. The Heroes of the Forest initiative was piloted in Virunga to help support the widows and children of rangers who lost their lives in the line of duty while protecting mountain gorillas and other wildlife. Over time, the program may expand to other parks.

Virunga National Park, Africa's oldest national park and a UNESCO World Heritage Site, is home to 200 of the world's 880 remaining mountain gorillas and a small population of eastern lowland gorillas. Virunga lies in eastern DRC and covers 3,012 square miles. It provides habitat for more species of birds, reptiles and mammals than any other protected area in Africa. The park is managed by the *Institut Congolais pour la Conservation de la Nature* (ICCN), or Congolese Institute for the Conservation of Nature.

Sacrifice of rangers

Despite decades of civil war and conflict throughout DRC, the park's gorilla population remains relatively stable. Dedicated park rangers patrolled Virunga during the long civil war, often for little or no pay under life-threatening conditions. When rangers die in the line of duty, their widows and children often become destitute, lacking income, medical help or housing. This ever-present threat has had a profound impact on ranger morale and puts an immense burden on families and local communities.

USFWS support

Through Heroes of the Forest, USFWS provided the seed funding to launch Virunga's Fallen Rangers Fund. This fund provides a small but critical financial safety net for the widows and children of deceased rangers (\$30 per month for each family). USFWS also works closely with park personnel on a wide range of conservation issues.

Below: Funeral procession for a ranger killed in the line of duty at Virunga National Park, DRC.

Credit: Virunga National Park



While many Americans know about the amazing wildlife in Africa's protected areas, few realize that scores of park rangers have been killed while protecting that wildlife.



Above: A ranger on patrol in Virunga National Park, DRC.

Credit: Virunga National Park

Wildlife law enforcement and protected area management

USFWS supports innovative projects to improve the application of wildlife laws throughout the Congo Basin. Historically, wildlife traffickers in Central African countries have enjoyed relative impunity from prosecution. The significant rise in the price of ivory driven by increasing demand has led to enormous pressure on elephant populations. Many lesser known species are also severely affected by wildlife trafficking, including pangolins, which are thought to be among the most heavily trafficked mammals in the world.

Weak law enforcement and judiciary ineffectiveness are major drivers that perpetuate the increase in wildlife crimes and provide little deterrence to poachers, traffickers and consumers. Wildlife trafficking syndicates often participate in other illegal activities, including trafficking in drugs and arms, sometimes with links to terrorist networks.

While long-term solutions at the local level are important, such as developing alternative income and protein sources for bushmeat-dependent communities, the rate of decline

in wildlife populations due to commercial poaching and the instability caused by wildlife crime syndicates have reached crisis levels and need immediate intervention. This decline poses the risk that few or no viable wildlife populations will be left to conserve by the time long-term solutions are implemented. Major commercial wildlife traffickers need to be stopped now through more effective law enforcement.

To address this crisis, USFWS is supporting the creation of a network of innovative partnerships with African governments and NGOs aimed at improving the application of wildlife laws and making historically ineffective legal systems more responsive to prosecuting violators.

Although elephants, apes and other endangered wildlife species are protected throughout their range by national laws and international treaties, the enforcement of these laws has largely been weak or non-existent. In fact, until 2003, not a single wildlife crime was prosecuted successfully in any Central African country.

In 2003, USFWS supported the Last Great Ape Organization (LAGA) to develop a new national level approach to address wildlife law enforcement in Cameroon. Building upon the need to connect civil society activism with government enforcement capacity, LAGA has developed a model-partnership approach for improving investigations, prosecutions, outreach and deterrence of wildlife crimes.

The project showed that a country can shift from a baseline of zero wildlife crime prosecutions to a rate of one prosecution per week for major wildlife traffickers. From 2003 to 2015 in Cameroon alone, nearly 500 wildlife traffickers were arrested with more than 400 being convicted. Similar efforts in Congo and Gabon have led to the arrest of nearly 500 wildlife traffickers and the conviction of approximately 350 of them.

With USFWS support, the model is now being replicated throughout Central Africa. Based in Yaoundé, Cameroon, LAGA assists and develops the replication of this model in other countries through the EAGLE (Eco Activists for Governance and Law Enforcement) network. This helps address the problem of wildlife law enforcement at the regional and international levels, as many wildlife crimes occur across borders. To date, this innovative partnership between government and local activists in nine Central and West African countries has led to nearly 1,200 arrests and more than 900 convictions of wildlife traffickers.

While not a panacea for solving the issue of wildlife trafficking, this approach continues to produce significant results and increases the capacity of Central African institutions to reduce the illegal trade in wildlife.

Canine units also serve an important function in enforcing wildlife laws. By detecting and reacting to certain scents and substances, dogs can be trained to assist anti-poaching and other conservation efforts. USFWS envisions three different ways for working dogs to assist conservation:

- Tracking dogs to pursue poachers in the field;
- Sniffer dogs to find illegal wildlife products at ports, border crossings and airports; and
- Detection dogs to monitor rare species in the wild.

Since 2012, USFWS has supported dogs and handlers to find ivory smuggled at Gabon's Libreville International Airport, bloodhounds to track poachers in Virunga National Park and sniffer dogs to detect evidence of the rarely seen Cross River gorilla in Cameroon's dense forests. Currently, projects piloting the use of dogs for wildlife work in Africa use dogs purchased and trained in Europe and the United States. USFWS would like to eventually see the development of capacity to breed and train conservation dogs within Africa.

Below: Arrest of an ivory trafficker in West Africa's Togo, where the EAGLE network has been active since 2013. Credit: Last Great Ape Organization (LAGA)

Opposite: A Virunga National Park ranger with a bloodhound trained to track poachers, part of Virunga's K-9 unit. Credit: Direk Byler / USFWS



Dogs can be trained to assist anti-poaching and other conservation efforts by detecting and reacting to certain scents and substances.



Congressional Act: African elephants

Purpose:

Support projects that work towards effective, long-term conservation of African elephants, and secure elephant populations threatened by poaching.

African elephants (*Loxodonta africana*) once occurred throughout sub-Saharan Africa. Elephants are a keystone species and play a pivotal role in maintaining the integrity of their environment. In response to sharply declining numbers, elephants were listed as threatened under the U.S. Endangered Species Act in 1978. Ten years later, the U.S. Congress passed the African Elephant Conservation Act. This Act established a fund to help protect, conserve and manage African elephants. The fund emphasizes elephant conservation in countries with uncontrolled poaching for ivory, which is the primary cause of their decline.

Forest elephants, endemic to Central Africa, have disappeared from much of the Congo Basin. The data show a growing problem:

- Across Central Africa, the total population of forest elephants declined by 62% between 2002-2011.
- Forest elephants have disappeared entirely from 30% of the geographic area where they occurred in 2002.
- DRC, the African country with the largest intact elephant habitat, lost up to 140,000 of 150,000 elephants in the past twenty years. The major drivers were warfare, the proliferation of weapons and trading in ivory to fuel rebel factions. Now most populations have fewer than 500 individuals.
- In 2012, 450 of the estimated 550 elephants in Bouba Njida National Park in Cameroon were slaughtered in a single season. In January 2015, ten more elephants were killed in one incident.
- Gabon has lost 50-70 percent of its historic numbers of forest elephants. ANPN estimates that more than half of the forest elephants in Minkébé National Park (the

country's largest population) were poached between 2004-2012, a loss of more than 11,000 elephants.

- In CAR, warfare and instability have compromised security for the world's best known forest elephant population, at Dzanga Bai. In May 2013, an occupying force slaughtered 26 elephants.

<i>Fiscal Year</i>	<i>USFWS Funds</i>	<i>Leveraged Funds</i>	<i>Number of Projects</i>
2014	\$361,817	\$552,460	5
2013	\$648,759	\$465,857	6
2012	\$786,215	\$781,321	10
2011	\$705,663	\$900,302	8
2010	\$1,134,930	\$855,941	13

Table 2. Funds awarded by fiscal year to support projects in Central Africa through the African Elephant Conservation Act. Most of the forest elephant projects are now supported by the Africa Regional Program.

Through the African Elephant Conservation Act, USFWS supports conservation activities that protect and manage elephants and their habitat by:

- Enhancing protection of at-risk elephant populations;
- Decreasing human-elephant conflict;
- Improving habitat conservation and management;
- Strengthening local capacity to implement programs;
- Collaborating on transfrontier elephant conservation;
- Developing skills in wildlife inspection, law enforcement and forensics;
- Engaging in conservation education and outreach;
- Conducting applied research, including surveys and monitoring;
- Developing and implementing elephant conservation management plans;
- Improving compliance with applicable treaties and laws;
- Using innovative technologies to improve protection; and
- Reducing ivory trafficking and demand.



Above: A forest elephant in Gabon. Credit: Matthew Muir / USFWS

Opposite: Group of forest elephants in CAR. Credit: Richard Ruggiero / USFWS

Through the African Elephant Conservation Act, USFWS supports conservation activities for these key elephant populations in Central Africa:

- TRIDOM region: including Minkébé, Djoua-Beling, Ivindo, Mwagne, Odzala-Kokoua, Ngombe forest management unit, Ntokou Pikounda, Mengame Dja, Nki, Boumba Bek (Cameroon, Congo, Gabon);
- Greater Sangha-Ndoki region: Lobéké, Dzanga, Ndoki-Likouala aux Herbes, Nouabalé-Ndoki (Cameroon, CAR, Congo);
- Lac Télé (Congo);
- Gamba complex-Loango-Moukalaba Doudou-Mayumba-Conkouati (Gabon, Congo);
- Lopé-Waka-Birougou (Gabon); and
- Maiko-Okapi-Ituri forest (DRC).



Some Central African countries have lost more than 80 percent of their forest elephants since 1970.

Congressional Act: Great apes

Purpose:

Support projects that will secure and conserve great ape populations and their habitats through monitoring, anti-poaching patrols and improved habitat management.

Apes, by their nature, are vulnerable to human activities. They have very low densities, grow relatively slowly, are long-lived, and have low reproductive rates and complex social relationships. Today, great apes across the world are threatened with extinction.

Central Africa has four species of great apes: the eastern and western gorilla (*Gorilla beringei* and *G. gorilla*, respectively), the chimpanzee (*Pan troglodytes*) and the bonobo (*P. paniscus*). The mountain gorilla and Grauer's gorilla are subspecies of the eastern gorilla. The Cross River gorilla is a subspecies of the western gorilla. Illegal bushmeat hunting, disease, the illegal pet trade and habitat degradation threaten great apes across Central Africa. To sustain viable populations of apes in both Africa and Asia, the U.S. Congress in 2000 passed the Great Ape Conservation Act. The long-term goal of this Act is to increase great ape survivorship within range countries.

The commercial trade in bushmeat and live animals, the impacts of extractive industries and the risk of infectious disease are the top threats to great apes in Central Africa. USFWS grants build greater awareness, political support and national capacity to conserve Central Africa's key ape populations. USFWS seeks to create sustainable financing mechanisms for great ape conservation and promote adherence to [IUCN Best Practice Guidelines for Great Ape Conservation](#).

Through the Great Ape Conservation Act, USFWS supports conservation activities that protect and manage great apes and their habitat by:

- Conducting applied research, including surveys and monitoring;
- Reducing trade in and consumer demand for bushmeat, pets and other illegal products derived from apes;
- Developing and implementing ape conservation management plans;
- Improving compliance with applicable treaties and laws;
- Engaging in conservation education and outreach;
- Enhancing protection of at-risk ape populations;
- Decreasing human-ape conflict;
- Improving habitat conservation and management, including in protected areas and reserves;
- Strengthening local capacity to implement conservation programs;
- Collaborating on transfrontier ape conservation; and
- Developing skills in wildlife inspection, law enforcement and forensics.

<i>Fiscal Year</i>	<i>USFWS Funds</i>	<i>Leveraged Funds</i>	<i>Number of Projects</i>
2014	\$646,434	\$1,362,395	8
2013	\$702,245	\$1,680,594	8
2012	\$2,072,647	\$3,493,030	23
2011	\$2,285,502	\$2,905,814	26
2010	\$3,003,224	\$2,900,538	25

Table 3. Funds awarded by fiscal year to support projects in Central Africa through the Great Ape Conservation Act.

Through the Great Ape Conservation Act, USFWS supports activities for key ape populations in Central Africa. Priority areas, as identified by the IUCN Primate Specialist Group, include:

Western Congo and Ogooué Basins:

- Birougou-Batéké-Zanaga (Gabon and Congo);
- Lac Télé-Likouala (Congo);
- Lopé-Waka (Gabon);
- Monte Alén-Monts de Cristal-Abanga (EG, Gabon);
- Odzala-Lossi-Ngombe-Ntokou-Pikounda (Congo); and
- Sangha Trinational (Cameroon, CAR, Congo).

Gulf of Guinea Forests:

- Cross River Gorilla landscape (Cameroon, Nigeria); and
- All 15 priority sites identified as 'exceptional' in the Regional Action Plan for the Conservation of the Nigeria-Cameroon Chimpanzee.

Eastern Congo and neighboring countries:

- Zemongo (CAR);
- Greater Okapi landscape (DRC);
- Bili-Rubi-Télé (DRC);
- Rwenzori-Semuliki-Hoyo (DRC);
- Misotshi-Kabogo (DRC);
- Tongo/Nyiragongo (DRC);
- Itombwe (DRC);
- Kahuzi-Maiko-Tayna (DRC);
- Kasese (DRC); and
- Virunga Tri-National (DRC, Rwanda, Uganda).

Key bonobo populations:

- Tshuapa, Lomami and Lualaba Rivers (TL2) (DRC);
- Maringa-Lopori-Wamba (DRC); and
- Salonga National Park (DRC).

Additional information on priority areas can be found at: http://www.primate-sg.org/action_plans/

Opposite: Silverback gorilla being groomed. Credit: Direk Byler / USFWS

Extractive industries pose a threat to great apes by reducing habitat and bringing them into closer contact with humans. This leads to a greater risk of poaching, disease and human-wildlife conflict.



Congressional Act: Marine turtles

Purpose:

Support projects that will conserve sea turtles and their nesting habitat and have a high likelihood of creating lasting benefits.

Marine turtles are ancient mariners of the world's oceans, with ancestors dating back more than 100 million years. Seven species of marine turtle currently navigate our oceans, and four of these species nest on Central African beaches: the leatherback (*Dermochelys coriacea*), green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*) and olive ridley (*Lepidochelys olivacea*). All are threatened with extinction.

Responding to declining numbers of sea turtles globally, the U.S. Congress in 2004 passed the Marine Turtle Conservation Act to assist with efforts to protect sea turtles and their nesting habitats internationally. Sea turtles migrate long distances across international boundaries and depend on multiple habitat types at different stages in their life cycle. Consequently, multinational collaboration is critical to successful sea turtle conservation.

In Central Africa, the main threats to sea turtles include poaching of eggs and nesting females for meat (green turtles) and shells (hawksbills); accidental capture in artisanal nets, industrial trawling and long-line fishing; and logs on nesting beaches, which entrap nesting females and hatchlings and block access to the best nesting locations.

Gabon is home to the world's largest breeding population of leatherback turtles, with up to 100,000 nests in a single nesting season. But history has shown that even larger nesting populations can crash within two decades in the absence of a comprehensive conservation program. In the early 1980s, leatherback nests along the Pacific coast of

<i>Fiscal Year</i>	<i>USFWS Funds</i>	<i>Leveraged Funds</i>	<i>Number of Projects</i>
2014	\$247,304	\$239,808	5
2013	\$387,000	\$244,377	6
2012	\$406,047	\$204,058	7
2011	\$333,693	\$203,454	6
2010	\$293,158	\$106,711	4

Table 3. Funds awarded by fiscal year to support projects in Central Africa through the Marine Turtle Conservation Act.

Mexico numbered in the 150,000 range per season. Today, these beaches hold fewer than 1,000 leatherback nests each year. USFWS is determined to prevent a similar collapse on the Central African coastline.

In the last decade, USFWS has supported the development and implementation of a comprehensive sea turtle protection program ranging from EG in the north to DRC in the south.

Through the Marine Turtle Conservation Act, USFWS supports conservation activities that protect and manage sea turtles and their habitat by:

- Engaging in community-based projects to protect nests and nesting females;
- Delivering education and outreach programs to foster conservation awareness in coastal communities;
- Conducting standardized ground and aerial nest monitoring surveys to document long-term population trends;
- Removing logs from nesting beaches;
- Working with artisanal fishers to release accidentally caught turtles; and
- Reducing bycatch from commercial trawlers.

Below: A green turtle grazes on sea grass off the Central African coast. Credit: Chelonee

Opposite: Leatherback hatchlings emerge from their nest. Credit: Sebastian Troeng / Conservation International



Through the Marine Turtle Conservation Act, USFWS supports conservation activities for sea turtles in the key nesting and feeding areas in Central Africa listed below:

Key nesting beaches:

- Bioko Island's southern beaches (EG);
- Pongara National Park (Gabon);
- Loango National Park (Gabon);
- Gamba complex (Gabon);
- Mayumba National Park (Gabon);
- Conkouati-Douli National Park (Congo); and
- São Tomé and Príncipe.

Key feeding areas:

- Corisco Bay, on the border of Gabon and EG, is the most important feeding ground in the region for green turtles.



History has shown that even large populations of nesting sea turtles can crash within years in the absence of a comprehensive conservation program.



Building a Better Evidence Base for Conservation

Strategy: Monitor threats to wildlife and their habitats; provide guidance for short-term actions and long-term strategies; and evaluate the effectiveness of conservation actions undertaken by our partners.

USFWS and its partners monitor and evaluate USFWS-funded projects to adapt and improve wildlife conservation efforts in Central Africa. To this end, USFWS has provided monitoring guidance for its Africa Regional Program so that success can be compared across projects. A more systematic approach has the potential to increase accountability and improve conservation success. This guidance will help USFWS and its partners better monitor, assess and report on performance and learn what works and what doesn't from other projects implementing similar actions.

To develop these indicators, USFWS identified key threats and actions and linked each of these to specific objectives, recommended indicators and monitoring questions. Stakeholders, including grantees, subject experts and colleagues from other agencies, vetted these indicators and helped develop a framework to assess threat reduction over the long term.

USFWS has developed recommended indicators for the following key threats in Central Africa:

- Commercial bushmeat hunting;
- Elephant poaching;
- Incompatible extractive industry practices;
- Road construction in ecologically sensitive areas;
- Agricultural encroachment;
- Wildlife disease;
- Sea turtle harvesting and bycatch; and
- Removal of animals from the wild for the pet trade.

Measuring the effectiveness of conservation actions requires more than counting short-term outputs, such as the number of meetings or patrol teams being equipped. USFWS grantees also cannot rely solely on indicators measuring the ultimate impacts – the status of the species and habitats of interest – to evaluate the effectiveness of their actions. Not only does a substantial time lag often exist between the implementation of an action and perceptible change in species or habitat status, but costs for accurately measuring and monitoring often exceed available USFWS funds.

USFWS takes a comprehensive approach to measuring the effectiveness of conservation actions by monitoring, evaluating and adapting projects and programs at intermediate stages. This process includes:

- Monitoring threats in all cooperative agreements;
- Revising guidance based on partner feedback;
- Communicating with partner agencies on joint measures of success; and
- Continually building a better evidence base to ensure conservation success in Central Africa.

USFWS has developed recommended indicators and performance questions for the following conservation actions in Central Africa:

- Establishment and management of patrols;
- Training and capacity development;
- Partner engagement;
- Wildlife law compliance and enforcement;
- Protected area designation;
- Public campaigns;
- Applied conservation research; and
- Promotion of best management practices for extractive industries.

For more details, see *Standard Measures of Effectiveness and Threats for Wildlife Conservation in Central Africa* at <http://www.fws.gov/international/pdf/guidance-effectiveness-measures-central-africa.pdf>

Opposite: MENTOR-FOREST Fellows conducting fieldwork in Gabon. Credit: Lauriane Besse-Streit / USFWS

Below: A MENTOR-FOREST Fellow collects data in Gabon. Credit: Lauriane Besse-Streit / USFWS



Conclusion

Securing wildlife and habitats, strengthening capacity

The situation in Central Africa has reached crisis levels for threatened species, habitats and the people who depend on these natural systems for their survival. What happens to Central Africa's wildlife and habitats affects the entire world. Finding viable solutions is critical to ensure the survival of forest elephants, chimpanzees, gorillas and other threatened and endangered species in the region.

Together with our partners' support, USFWS occupies an important niche in the spectrum of conservation activities in Central Africa. This document presents an overview of current threats and the USFWS vision for practical actions that seek to eliminate them. It emphasizes a team-oriented approach that builds upon lessons learned by USFWS and partners to address conservation concerns and opportunities in a challenging environment.

To successfully achieve conservation in Central Africa, USFWS and its partners are working to combine immediate

threat-reducing activities with long-term efforts that will strengthen political will, governance and the capacity to effectively manage conservation programs in-country.

Taken together, the guidance in this document provides a vision to strengthen the capacity needed to conserve priority species and habitats across landscapes. The effectiveness of approaches in achieving this vision will be tested by time and can be adapted as needed. As the experience of USFWS and partners continues to grow in Central Africa, so will the strategic and tactical approaches to ensure conservation success.

The future survival of Central Africa's threatened and endangered species will require a concerted effort that builds upon the various strengths of partners among governments, NGOs and local communities. Together, this vision can be achieved.

Below: Forest elephants in a bai at Dzanga-Ndoki National Park in CAR. Credit: Daphne Carlson Bremer / USFWS
Opposite: Red river hogs in Loango National Park, Gabon. Credit: William Kanapaux / USFWS





Acronyms

ANPN - *Agence Nationale des Parcs Nationaux*, or Gabon's National Parks Agency.

CAR - Central African Republic.

CARPE - Central Africa Regional Program for the Environment. A USAID program with the primary objective of reducing the rate of forest degradation and biodiversity loss in the Congo Basin by increasing capacity for natural resource management at local, national and regional levels.

CBFP - Congo Basin Forest Partnership. A multinational, multi-agency partnership to address Central Africa's conservation needs and opportunities spearheaded by former U.S. Secretary of State Colin Powell in 2002 and comprising about 70 members, including the ten COMIFAC countries and a host of other countries and partners.

CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora. CITES entered into force in 1975, and became the only treaty to ensure that international trade in plants and animals does not threaten their survival in the wild. A State or country that has agreed to implement the Convention is called a Party to CITES. Currently there are 181 Parties including the United States.

COMIFAC - Central African Forests Commission. Its members are: Burundi, Cameroon, Congo, Chad, EG, Gabon, Rwanda, CAR, DRC and São Tomé and Príncipe. COMIFAC provides a forum for consultation and collaboration. Central African heads of state adopted its Convergence Plan, which articulates a regional conservation strategy.

Congo - Republic of the Congo.

DRC - Democratic Republic of the Congo.

EAGLE - Eco Activists for Governance and Law Enforcement.

EG - Equatorial Guinea.

ENEF - *Ecole Nationale des Eaux et Forêts*, or Gabon's National School of Water and Forestry.

ETIS - Elephant Trade Information System.

ICCN - *Institut Congolais pour la Conservation de la Nature*, or National Institute for Nature Conservation in DRC.

IUCN - International Union for Conservation of Nature. Composed of 1,200 member organizations and governments. Its work focuses on nature conservation, effective governance and nature-based solutions to global challenges.

LAGA - Last Great Ape Organization, part of the EAGLE network.

MENTOR-FOREST - Mentoring for ENvironmental Training in Outreach and Resource conservation - FForest Research Ecology and Stewardship Training.

MIKE - Monitoring of the Illegal Killing of Elephants, a database established by CITES.

NGO - Non-governmental organization.

TEDs - Turtle excluder devices. TEDs reduce turtle captures in the nets of shrimp and fish trawlers.

USAID - United States Agency for International Development. An independent U.S. Government agency that provides economic, development and humanitarian assistance around the world in support of the foreign policy goals of the United States.

USFS - United States Forest Service. A U.S. Government Agency within the Department of Agriculture. Through its International Programs, USFS promotes sustainable forest management and biodiversity conservation throughout the world.

USFWS - United States Fish and Wildlife Service. A U.S. government agency within the Department of the Interior. USFWS works with partners worldwide to conserve fish, wildlife, plants and the habitats they depend on, and to maintain the integrity of ecological processes beyond our borders for present and future generations.

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