
Too Big to Fail: Rescuing the African Elephant

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SUMMARY

Today, there exists a confluence of complex and escalating threats to the natural environment in Africa. Wildlife populations are being decimated, forests cleared, and habitats—both animal and human—destroyed. Illegal trade in wildlife and forest products threatens both the environment and sustainable development. Despite urgent warnings from studies, research about changes in forest plant and animal composition remains fragmented and lacks consideration of the cascading ecological, socio-economic, and cultural dimensions. Proposals aimed at environmental sustainability are conventionally siloed in their various disciplines, yet all agree that realistic solutions must incorporate cohesive and coordinated action at local, national, and international levels.

The illegal wildlife trade is a particularly perplexing piece of the current environmental emergency; untangling the web of poverty, crime, corruption, and governance dynamics continues to confound policy makers. In the case of Africa's elephants, the urgent task of reversing the escalation of poaching requires a carefully recalibrated mix of legislation, land management, enforcement, and demand-reduction strategies. The crisis facing this increasingly threatened species is emblematic of the challenge presented by all wildlife protection: components of demand and supply stretch across continents; official and unofficial realms must work

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together to find common ground; and the central question of price and priceless­ness must be continually renegotiated in a changing world. Rapid changes in the African landscape have not only accelerated general species loss, but also refocused conservation efforts on the underlying systemic forces imperiling elephant populations. Increasingly dramatic degradation of livelihoods, security, and governance requires bolder and broader policy responses. This paper both discusses the elephant's threatened environment and reviews current thinking about how best to respond to the dynamic systems that are challenging effective conservation efforts.

POACHING AND NON-STATE ARMED GROUPS

There are two subspecies of African elephants—the savanna (bush) elephant and the forest elephant. Forest elephants comprise about 30 percent of Africa's elephants; they prefer the cover of the dense forest canopy of the Congo Basin, while savanna elephants are found in eastern and southern Africa. Both species are in sharp decline. Without intervention, wild elephants could be mostly extinct by the end of the next decade.¹ No one is certain about how many elephants remain in Africa, and this

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..... lack of knowledge about exact numbers hampers preservation efforts. Since the turn of the century, the number of wild elephants has dropped from the millions to about half a million today. Driven primarily by the high value of ivory on the international market, elephant poaching has dramati-

cally escalated over the last decade. In that time, elephants have suffered a dramatic decline of over 62 percent: from 2010 to 2012, more than 100,000 elephants were illegally killed by poachers seeking ivory or meat.² Currently, elephants are being poached at a rate of about 100 each day, and estimates place the total surviving population at approximately 470,000.³

Trying to measure the size of the illegal trade in wildlife is difficult. Depending on the study, estimates range from USD 7 to 23 billion annually, placing the wildlife trade as the fourth largest illegitimate business globally.⁴ As with the illegal forest trade, the black market value of these exploited species represents a huge loss of economic potential for African countries. Targeted species are diverse and, in many cases, being poached to the limits of their existence.⁵ Along with elephants, a number of iconic species fall within this category: rhinos, tigers, and great apes. Increased

globalization and the online marketplace have created a superhighway for poachers and traders to move wildlife parts around the globe. Craigslist, eBay, and Alibaba are favored outlets for consumers and criminals alike. A 2013 survey of online auction websites
 in Australia found 145 ivory listings
 appearing on eBay Australia; two-thirds
 of these listings were posted by overseas
 sellers, predominantly located in the
 United States.⁶

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Driving the increased demand for
 ivory are China, the United States, and
 Thailand, which are three of the major
 end user markets across the globe.

Transit countries, where organized criminal syndicates actively under-
 mine international law and circumvent national regulations, are primarily
 Malaysia, Vietnam, the Philippines, and Hong Kong.⁷ Many factors drive
 the high value of ivory per unit mass. First, poachers receive a highly dispro-
 portionate price, in terms of relative annual income earnings, for a pair of
 tusks, and the black market network increases the price all along the trade
 chain. Second, the limited supply is impacted by elephants' long gesta-
 tion period, with long maturation and inter-birth intervals.⁸ The price of
 elephant ivory to workshop owners in China has tripled since 2010; in
 early 2014, the wholesale price had topped USD 2,100 per kilogram in
 Beijing.⁹ Notably, research shows that sale prices in Africa remain as low as
 one-tenth the final price. Criminal gangs earn money by purchasing ivory
 from poachers at low prices and then inflating the cost as it moves along
 the supply chain; they exploit the dynamic between low prices in Africa and
 high demand in China to generate big profits.¹⁰

The potential for vast enrichment has led to poaching's militarization
 and the fueling of conflicts throughout Africa's more fragile states. Enabled
 by weak law enforcement and porous borders, illegal trade in ivory benefits
 criminal gangs, corrupt military units, militia, and even terrorist groups.
 Together with drug trafficking and kidnapping operations, illegal wildlife
 is among the main sources of revenue for terror groups such as the Lord's
 Resistance Army (LRA) in the Central African Republic, the Sudanese
 Janjaweed, and Al-Shabaab in Kenya and Somalia.¹¹ An undercover
 investigation into ivory trafficking through Al-Shabaab's network deter-
 mined that the funds generated by this trade have become the life blood
 for financing their activities.¹² For warlords such as Joseph Kony of the
 LRA, profits from elephant poaching have become the means of sustaining

power and control over regional natural resources and local populations, compounding regional misery with poverty and violence. In many cases, these armed groups act as contractors, recruiting and organizing locals to do the hunting. Rural poverty facilitates the ability of organized criminals to recruit, bribe, or threaten locals. In the hierarchy of militias, ivory is a foot soldier's paycheck, where militia officers control more lucrative taxation operations.

As with most aspects of environmental crime, myriad factors impact each link in the illegal ivory trade chain. Poachers may be villagers, non-state criminals, corrupt park rangers, or state military personnel. Poaching can take place both within and outside protected areas or on private land. The transport networks moving ivory across international borders and overseas involve vast networks of couriers, national receivers, facilitators, and buyers.¹³

Ultimately, the illegal trade in ivory is driven by consumers who are willing to pay increasingly high prices for an increasingly rare commodity. The high prices are fueled by growing demand from a growing affluent Asian middle class. Changing consumer behavior through public awareness campaigns is slow and often generational; in Asia, such efforts have only recently begun to show results.¹⁴

HABITAT AND DEFORESTATION

The World Bank estimates that more than 1.6 billion people worldwide depend on forests to some extent for their livelihoods.¹⁵ For people living in extreme poverty, forests provide a safety-net source of fuel, food, and other informally harvested resources when crops fail. Wood is gathered from the open savanna woodlands and on communal land surrounding villages. In Africa specifically, where population growth is rapid and poverty levels high, the demand for cheap energy sources is bursting. According to the United Nations Environment Programme (UNEP), up to 90 percent of wood harvested in Africa is used as firewood and charcoal for cooking.¹⁶ With population growth, the demand for cheap fuel means that deforestation spreads. Between 2010 and 2015, the Food and Agriculture Organization of the United Nations (FAO) reports that four African nations¹⁷ are among the ten countries reporting the greatest annual forest area reduction.¹⁸ Further, a 2013 study of South Africa has estimated a total elimination of all biomass in the country within thirteen years.¹⁹

Much of this harvested wood is gathered illegally. Unmanaged extraction of natural resources and illegal trade in forest products is not

only altering landscapes but also hastening drought and climate change. Rapid environmental degradation destabilizes local economies and escalates human security threats. As deforestation rapidly accelerates, so too does the rate at which elephant habitats are destroyed. Large enough to be invulnerable to non-human predators, elephants prefer high-density tree sites, and these landscapes consistently host the highest concentrations of elephants.^{20,21} Adding to the habitat loss, not just for elephants but for a wide range of species, is the land being put into agricultural production or used for commercial logging. Massive expansion of roads and infrastructure have encouraged the spread of villages and provided new access for hunters. The building of mining infrastructure in the Congo basin has dramatically increased access to the largest remaining population of forest elephants.²² To address these problems, USAID is currently working with private companies to mitigate logging concessions in the Congo by granting access to premium markets in exchange for implementing best practices.²³

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The fragmentation this development creates in the elephant habitat compounds the impact of massive new investment in roads and infrastructure. With roaming distances of up to 1,900 square miles, elephant herds need large territories in order to flourish. Massive breeding herds have been known to travel thousands of miles across wild lands and national parks, through private farms, into towns, and even to neighboring countries. Due to threats from poachers, forest elephants have dramatically reduced their range and remain bound to an ever-shrinking but protective forest.²⁴ Some observers have documented the swift movement of elephants across unprotected areas and dubbed it “streaking.” This movement, often seen at night, is understood as elephants’ attempt to minimize time spent in dangerous open areas.²⁵

There is need for a network of wildlife corridors that connects protected areas across national borders, creating trans-frontier conservation areas. Enabling safe access to greater natural resources will reduce elephant encroachments onto agricultural fields and villages, thereby reducing human-elephant conflict. Corridors that connect parks can increase areas of protection and reduce the need for translocations.²⁶ Outside protected areas, local knowledge about the geographical location of existing corridors can be used to map and plan less disruptive development.²⁷ An informative study of Mount Kenya National Park and National Reserve has yielded useful data and recommendations for future corridor projects.²⁸

The protection and expansion of wildlife corridors would benefit not only elephants, but a much broader species population as well.²⁹

The rapid rise of large-tract land acquisitions by multinational corporations means they should be compelled to incorporate environmental practices into their operations. Investment in logging and mining, along with the rapid development of roads and other infrastructure, has had negative impacts throughout the continent. Shifting the costs of preserving

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wildlife habitats and elephant herds to the same agencies and businesses that disrupt these wild places is increasingly a matter of security. Many U.S. corporations are already conducting risk assessments that weigh the risks of harmful practices against sustainable operations. Taxing investors for negative environmental impacts could provide necessary environmental preservation funds. With billions being invested on natural resource extraction,

even the smallest fee for protecting wilderness areas could prove essential to conservation efforts and still trivial to corporate profits.³⁰

ELEPHANTS, CHARCOAL, AND CRIMINAL NETWORKS

The sustainability of elephant habitats is inextricably linked to that of other natural resources, such as wood. Wood is harvested to fill an increasing demand for charcoal (itself a wood product), which exacerbates deforestation and drought, loss of forest livelihoods, and land degradation. The resulting economic instability fuels militias and more wildlife crime. Thus, the elephant loses its habitat and essential sources of water, all while under mounting fire from poachers eager to broaden their income base. Between 1950 and 2010, of the 34 biodiversity hotspots identified around the world, more than 80 percent have experienced conflict directly within those areas, and most have suffered recurring episodes of violence.³¹

This demand for charcoal, which burns longer and cleaner than wood itself and is cheaper than most other fuel sources, comes largely from its increasing popularity with newly urbanized households. The expanding and largely unregulated charcoal market has attracted another element: non-state armed groups looking for purchasing power to fund their operations. Organized criminals, militias, and terrorist groups across Africa

regularly conduct illicit taxing of charcoal, commonly up to 30 percent of its value at the point of sale.³² As wood and charcoal are transported across the continent, fees accrue at each juncture along the value chain. Controlling road crossings, seaports, and borders all provide militias with lucrative opportunities for creating income. For example, the primary source of revenue for the terrorist group Al-Shabaab appears to stem from their involvement in the charcoal trade—an amount estimated at USD 38 to 56 million annually.³³

Circumventing the legal markets, criminal networks deprive African governments of revenues of USD 1.9 billion annually.³⁴ In 2012, “expressing concern that charcoal exports from Somalia are a significant revenue source for Al-Shabaab and also exacerbate the humanitarian crisis,” the U.N. Security Council passed Resolution 2036, banning Somali exports of charcoal.³⁵ Affirming the broader international repercussions of environmental crime, just months later, U.S. President Obama issued an amendment to an executive order aimed at starving this militant group and other criminal networks of resources derived from charcoal sales.³⁶ The export of charcoal from Somalia, however, continues despite these statements; demand plus lack of regulation on the ground equals lucrative business opportunities for armed militias looking for income with which to purchase weapons and medicine. In October of 2015, the U.N. Security Council again urged Somali authorities to “take the necessary measures to prevent the export of charcoal from Somalia.”³⁷

Environmental crime undermines security, law and order, and years of development gains. The wildlife and timber trades share a common attraction for criminals eager to use legal commerce to obscure their illegal operations. The vastly unregulated wood fuel and charcoal trade serve to blanket illegal logging in protected areas in a shroud of legitimacy.³⁸ Recognizing that better protection of its natural resources can yield more local prosperity and security, some countries such as Kenya, Tanzania, and Gambia have imposed bans on charcoal production in order to preserve the trees and forests. Unfortunately, these bans have had little success against the pressures of changing demographics and a production chain that begins with illegally gathered wood being exploited from unsustainably managed forests. Thus, the knot of conflating forces tightens, and elephant habitats suffer.

BUSHMEAT AND THE EMPTY FOREST

Tropical forests are among the most species-rich ecosystems on the planet, containing approximately 20 percent, 60 percent, and 70 percent

of all known mammals, birds, and amphibians, respectively.³⁹ African tropical forests represent about 18 percent of the world's total according to the last comprehensive assessment done by UNEP/FAO.⁴⁰ Bushmeat is a crucial part of rural food security and livelihoods across the tropics; however, out of fifty-seven mammal, bird, and reptile species hunted throughout the Congo Basin, 60 percent are harvested unsustainably.⁴¹

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..... Illegal over-hunting of wild and endangered animals for food, income, and commercial purposes has increased, leading to a bushmeat crisis. Bushmeat consumption around the world is estimated to be between 4 and 5 million metric tons per year.⁴² In Central Africa, where approximately 1 million metric ton of bushmeat is consumed annually, illegal bushmeat hunting is considered to be the single greatest threat to wildlife.⁴³ Although elephants are only 5 percent of the total bushmeat harvest, they play an essential role in maintaining and enriching habitats.

By some calculations, the fight against poaching is almost easier than managing problems of over-hunting. Many studies demonstrate a strong correlation between population density and depleted bushmeat faunas.⁴⁴ Given current rates of population growth, large-scale degradation of ecosystem structure in forest regions is certain unless remedies are found.⁴⁵ Bushmeat hunting is pervasive, and workable solutions must include assessments of the entrenched social-ecological systems in play. Policies for achieving a sustainable harvest need to consider the complex, dynamic relationships between the hunting ground, its resources, the stakeholders, and the different external drivers of change, each of which affects different components of the system at different scales.⁴⁶

Elephants are less resistant to intensive hunting. Larger-bodied, longer-lived species with low intrinsic rates of population increase, such as apes, antelopes, and tapirs, are extremely vulnerable to over-hunting.⁴⁷ The most resilient species are often able to adapt to hunting pressure, either by modifying their biological parameters and their ecology or by taking the niches left empty by the most vulnerable species.⁴⁸ In the case of elephants, tusk-less females who have been spared by poachers are actually passing on the genetic tusk-less trait to their offspring. The frequency of female elephants without tusks in Zambia's South Luangwa National Park increased from 10.5 percent to 38.2 percent during a twenty-year period.⁴⁹

Most ecosystem processes are driven by cascading changes in the composition and engagement of animal and plant species. The unregulated bushmeat trade has disrupted many natural ecological processes and led to what is commonly referred to as the “Empty Forest Syndrome,” a condition in which animals disappear at much faster rates than their habitats.⁵⁰ Healthy forest ecologies require the combined forces of many species, but ever-intensive hunting has created vulnerabilities to important ecosystems. Elephants serve as a keystone species: the impact of their presence in maintaining a structured ecosystem is disproportionate to their numbers. Elephants shape their ecosystem, and animals within the same ecosystem depend on elephants for their own survival. For example, elephants affect plant distribution and tree regeneration through seed dispersal, grazing, rooting, and other mechanisms. Dispersal and germination of many varieties of seeds appear to be wholly dependent on elephants. The signature service that elephants provide for a large number of plant species is their strength to break otherwise imperious seeds, guts capable of adequate germination, and a roaming range that insures wide spatial distribution.⁵¹ Elephants, acting as ecological engineers, maintain tree diversity and retain low redundancy in seed dispersal. Thus, the disruption of their essential ecological services as seed dispersers threatens the overall ecosystem and food security of entire countries.

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NATIONAL PARKS AND POVERTY

Poaching thrives in conflict zones; it also thrives in communities experiencing chronic poverty. Rural populations’ livelihoods depend heavily on local natural resources. Research suggests that levels of poaching are strongly correlated to land use type; in community pastoral land and forest reserves, poaching is remarkably high.⁵² Designing a stakeholder system that creates incentives for safeguarding against crop-raiding elephants requires careful calibration. It is far less expensive to establish a land ownership business model that discourages illegal hunting than it is to apprehend and arrest poachers. Areas next to protected areas require design initiatives that deliver tangible benefits by improving local economies. Systems for allowing local communities to derive economic benefits from elephants will help to offset the costs of crop degradation and provide local communities with greater

ownership and protection interests. In this model, marauding poachers would be regarded as thieves stealing local community assets.

Ecotourism is recognized as a key contributor to economic development in communal areas that has generally translated into better protection for elephants. Tourism in the parks that builds sustainable livelihoods for communities through responsible stewardship of wildlife resources also makes solid financial sense. While a living elephant creates jobs for rangers

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and guides, and benefits tour companies, travel agencies, and airlines over its lifetime, a dead elephant is only worth the market rate for its tusks, and those funds flow to militias and criminal networks.⁵³

There is a great deal of debate about the role that trophy hunting plays in wildlife conservation, and reaching a consensus opinion among

stakeholders and experts is difficult. For every research paper modeling a sustainable hunting program, there exist countervailing proposals that warn about such overlooked factors as species-specific resiliency of wildlife populations and the impact of dynamic human settlement densities.⁵⁴ Until recently, the private ranching and community conservation land models have shown the most promise for local preservation efforts. Most professional safari hunting companies operate on remote land with impoverished populations, where income from fishing and hunting can be an essential bonus for low household incomes. However, recent high profile deaths of iconic animals have drawn critical attention to this industry.⁵⁵ The dramatic decline in big game populations have conservation groups calling for a moratorium on all hunting, or “shooting”, as it is sometimes referred to by detractors.⁵⁶ Captive-bred wildlife companies are also under fire as they struggle to prove that their industry is beneficial to animal conservation. A single license to shoot a big game animal can bring USD 350,000 in fees to operators. By design, these funds are intended for wildlife conservation and to benefit local communities. In reality, corruption eats away at this revenue and hunting lands are often claimed by the political elite.⁵⁷ According to the International Union for Conservation of Nature (IUCN) and recent reports, the sports hunting industry does not provide significant benefits to the communities where it occurs.⁵⁸ Without viable monitoring and control systems in place, corruption and other illegal practices abound.

RANGERS AND ENFORCEMENT

Park rangers are notoriously underpaid and undervalued, despite the increasingly militarized terrain of wildlife game reserves. In the past decade, 1,000 rangers lost their lives defending wild animals; 75 percent were killed by commercial poachers and armed militia groups.⁵⁹ Ill-equipped and outnumbered, rangers need every advantage they can get. They need better education and training of tactical tracking and intelligence units within protected areas in order to counter the operations of heavily armed poachers. Improving and intensifying law enforcement efforts on the ground through implementation of rigorous training systems is key. The development of international agreements to facilitate cross-border cooperation will help to develop stronger zones of protection. In many instances, regulations prevent park rangers from pursuing poachers and conducting patrols outside park boundaries. With uncompromised enforcement on the ground, the tide of poaching can be slowed.

Fighting a one-sided poaching war with brutal gangs makes rangers vulnerable to the corrupting temptation of bribes.⁶⁰ In some instances, rangers have become the poachers; in one recent incident, rangers protested a wage dispute by poisoning the elephants they were hired to protect.⁶¹ Fair salaries and other economic incentives are often the best protection against wildlife crime, much in the same way that an engaged local population has positive implications for security. The best intelligence about poaching activity can come from partner villages.⁶² New local channels for solid information coupled with close monitoring of illegal killings of elephants in protected areas gives field officers better odds for countering attacks.

Research on biodiversity hotspots—areas where certain species can only be found—shows that they are particularly vulnerable to human disturbance, attracting frequent patterns of violence against wildlife. Further, militias often use the cover of dense forest to their strategic advantage; remote, inaccessible landscapes offer tactical benefits to non-state armed forces. During prolonged conflict, when sociopolitical frameworks collapse, protected areas that contain biodiversity hotspots may be left with no paid park staff or equipment. At the same time, wartime can also serve to buffer hotspots from human settlement and destructive commercial activity. In both cases, better outcomes for biodiversity conservation are possible when NGOs stay engaged with park personnel throughout periods of conflict and post-conflict reconstruction.⁶³ When governments work with local area staff throughout conflicts and during long periods of war, this strengthens

protection and conservation work. It is essential to weave environmental safeguards into military, humanitarian, and reconstruction efforts.⁶⁴

Containing wildlife poaching also requires technological innovation and increased funding. Limited use of drone surveillance, GPS trackers,

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and specially trained dogs has begun in protected areas, but resources for expansion of these programs is still needed. The establishment of many well-equipped forensic labs could strengthen security units with the data they need for more effective deployment of customs officers at ports and rangers in the field.⁶⁵ New methods of forensic testing make it possible to extract elephant DNA from seized ivory shipments and trace it to its country

of origin. Contrary to expert assumptions about widespread poaching activity, the data from testing shows that poached ivory can be traced to a few regions of intense activity.⁶⁶ With increased funding for frequent DNA investigations, understaffed law enforcement units could better focus their efforts and more effectively counter the escalation of trafficking. Professionalizing park personnel is also a priority for the U.S. government seeking ways to cut off funds flowing to militias. Assistance for park protection in the form of equipment for rangers is being provided with proceeds from confiscated contraband. The U.S. Department of State reports that plans are underway to “cooperate with other nations in a comprehensive effort to combat wildlife trafficking, including through joint training, technical exchanges, information sharing, public education, and international law enforcement.”⁶⁷

TRADE AND TRAFFICKING

Despite recent focused attention from governments and NGOs, wildlife enforcement is still limited at both the national and international levels. With the sharp spike in poaching activities, resources for adequate anti-trafficking enforcement have fallen short. Cartels looking to elude authorities at certain checkpoints will poach ivory from one country and ship it from another. At present, smugglers have little fear of being discovered—and when they are, little fear of being arrested or fined. In many countries, penalties for ivory poaching and smuggling are negligible with

small fines and no jail time, and this must be remedied. Legal reforms to criminalize trafficking will strengthen the criminal justice system, and serious deterrence depends on increasing the efficacy of the law.⁶⁸

An immediate end to all sales of ivory may also resolve many of the enforcement problems inherent to this trade. Even the most conservative allowances for legal commerce require
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A legal ivory trade means ongoing law enforcement problems and opportunities for corruption. One investigative study found that “some USD 18,000 to 30,000 each day is given to border officials at just three smuggling points on the Vietnam-China border.”⁶⁹

Notably, no economic studies of the wildlife trade examine market dynamics, stakeholders, drivers, size, customers, and supply. Some simple game theory models, however, have been employed to calculate the highest impact course of action. One 2015 study concludes that “if ivory stockpiles are ... (simultaneously) obliterated, demand for ivory reduced and domestic trades banned, the exchange value of elephants will essentially move towards zero.”⁷⁰ In light of spectacular anti-smuggling failures—as evidenced by a series of huge ivory seizures in 2014⁷¹—support for legalizing the ivory trade at any level is dwindling. Arguments for implementing tightly controlled legalized trade fail to calculate the human corruption factor, even as events demonstrate that government stockpiles are vulnerable to criminals and corrupt officials.⁷² One-off sales in 1999 and 2008, as well as official sales of naturally accruing stockpiles, have only fueled poaching by sending mixed supply signals to the market, and these sales actually revitalized illegal trade and renewed demand.⁷³ The regulatory capacity to distinguish between legal and illegal ivory is often non-existent and each portal for official intervention is an opportunity for bribes and corruption.⁷⁴ As long as legal domestic markets remain, criminal networks and corrupt officials will find a way to exploit them, and wildlife and forest products will continue to be laundered through legal supply chains.

This year has marked important developments in cooperation between the world’s two largest ivory markets. In February 2015, China declared a one-year moratorium on trade and later in May, announced plans to phase out its domestic ivory industry. In July, the Chinese and

United States governments agreed to work toward a “nearly total ban” on imports and exports of ivory.⁷⁵ During a joint meeting in September 2015, Presidents Obama and Xi Jinping met in Washington and “decided to further cooperate in joint training, technical exchanges, information sharing, and public education on combating wildlife trafficking, and enhance international law enforcement cooperation in this field.”⁷⁶ This near-complete ban on commercial trade will help control U.S. domestic markets currently vulnerable to contraband. Some remaining legal but obfuscating provisions such as the exception for mammoth ivory will challenge effective enforcement. The International Convention on Trade in Endangered Species (CITES) does not regulate trade in the products of extinct species such as mammoth.⁷⁷

Any new trade bans and enforcement regulations will need to be implemented with care to avoid triggering an escalation of poaching prior to rule changes, paying close attention to unintentional effects on black markets. Questions remain about whether the African regulatory environment is sufficiently robust to meet the obligations of closer regional integration and international pacts given the recent scale of ivory sales and seizures. Success will require enhancing collaboration and cooperation among countries and enforcement agencies committed to sharing intelligence about transboundary movements of wildlife products.

Operation Cobra II, one such global effort in 2014, involved law enforcement authorities from twenty-eight range, transit, and destination states, including China, South Africa, and the United States. This joint initiative led to over 400 arrests and 350 major seizures of various wildlife products. The month-long Cobra II operation included the first-ever joint China-Africa undercover sting operation, which identified and arrested members of a major ivory trafficking syndicate. Based on the success of this collaboration, authorities are preparing for future collective action and working to strengthen transboundary controls and partnerships.⁷⁸

CONCLUSION

The wider world is awakening to the urgency of Africa’s environmental crisis and the real possibility that elephants may be irreplaceably lost. Past responses have failed to confront the scale of this problem, but the involvement and brutality of non-state armed groups has recently riveted the attention of governments around the globe. Future hopes for a less fragmented response to environmental wildlife crime look promising, as more global partnerships form at all levels of the implementa-

tion, management, and enforcement chain. Over the past year, a variety of NGO conferences, presidential summits, and conservation competitions have addressed the rapid development and implementation of broad-based policies, technologies, and strategies to counter illegal killing of elephants.

Pressure on Africa's forests and savannas will continue to grow, as more than half of the world's population growth between now and 2050 is expected to occur in Africa. With the world's highest rates of fertility, the African population is projected to grow by an additional 1.3 billion people during this period.⁷⁹ This demographic trajectory is quickly distilling the elephant conservation crisis into two essential elements: not only stopping the poaching, but also providing adequate land for elephants to maintain viable populations and fulfill their ecological role.⁸⁰ Human stresses on the land necessitate stronger governance and land tenure policies that promote stability. Successful stabilization through conservation will require collaborative land use programs, regional information sharing, and engagement across borders.⁸¹ The challenge of protecting Africa's biodiversity and vast ecosystem is vital not only for elephants, but also for local livelihoods, food security, and peaceful coexistence. Without future collaborative conservation, there will be no lasting development, security, or progress. *f*

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ENDNOTES

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