

Ivory's Curse

The Militarization & Professionalization of Poaching in Africa

—
by Varun Vira and Thomas Ewing

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c4ads

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LEGAL DISCLAIMER

The mention of any individual, company, organization, or other entity in this report **does not** imply the violation of any law or international agreement, and should not be construed as such.

Executive Summary

Elephant ivory poaching is no longer solely a conservation issue. As poaching reaches levels that threaten to render African elephants near-totally extinct within the next ten years, it also funds a wide range of destabilizing actors across Africa, with significant implications for human conflict. A single elephant yields 10kg of ivory worth approximately \$30,000; a conservative estimate is that 23,000 elephants were killed in 2013. With the true figure likely much higher, the ivory trade could be worth as much as a billion dollars annually, and will likely increase with the escalating retail price of ivory. This report provides detailed case studies of how these profits empower a wide range of African conflict actors:

- From Sudan, government-allied militias complicit in the Darfur genocide fund their operations by poaching elephants hundreds of miles outside North Sudan's borders.
- In the Democratic Republic of Congo, state security forces patronize the very rebels they are supposed to fight, providing weapons and support in exchange for ivory.
- Zimbabwean political elites, including those under international sanction, are seizing wildlife spaces that either are, or likely will soon be, used as covers for poaching operations.
- In East Africa, al-Shabaab and Somali criminal networks are profiting off Kenyan elephants killed by poachers using weapons leaked from local security forces.
- Mozambican organized crime has militarized and consolidated to the extent it is willing to battle the South African army and well-trained ranger forces for rhino horn.
- In Gabon and the Republic of Congo, ill-regulated forest exploitation is bringing East Asian migrant laborers, and East Asian organized crime, into contact with Central Africa's last elephants.
- In Tanzania, political elites have aided the industrial-scale depletion of East Africa's largest elephant population.

In short, ivory poaching has significant human impact. At the most macro level, the ivory trade is essentially a large-scale illicit resource transfer from Africa to Asia; on the ground, however, ivory is bush currency for militants, militias, and terrorists, and one of the most valuable pieces of illicit contraband for organized criminals and corrupt elites.

The modern ivory trade was built on war, and elephant poaching remains highly militarized, empowering a wide range of conflict actors and transforming the nature of wildlife conservation in Africa. Park managers and conservation NGOs have already been forced into roles as *de facto* soldiers and policemen, and the pace and professionalization of poaching show no signs of abating. Finally, as elephant populations disappear in Central Africa, and the price of ivory continues to rise, poaching will continue to displace into Eastern Africa, and will likely soon appear in still-secure ranges in Southern Africa.

This study was based on extensive C4ADS interviews and correspondence; public records research; local, international, and native language reporting; social media; analysis of available datasets from governments, NGOs, and other sources; and other forms of open-source research. The mention of any individual, company, organization, or other entity in this report does not imply the violation of any law or international agreement, and should not be construed as such.

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Introduction

An abundant endowment of high-value wildlife can be a resource curse that ultimately leaves human societies worse off. The damage being done to African elephants from poaching is very real, but so is the damage being done to African societies.

The specialized skillsets required for modern ivory poaching and trafficking explain the prominence of conflict actors, human rights abusers, and predatory elites. Harvesting ivory requires violence, its trafficking requires subterfuge and influence, and its marketing requires connections. Those individuals and entities with skills in killing, smuggling, and leveraging corruption are best positioned to profit, and today they have monopolized the trade and the majority of profits. As demand for ivory causes the price of an individual tusk to reach record levels throughout Africa, there is no shortage of young men willing to shoulder a rifle to kill an elephant. A surplus of armed young men with dwindling economic opportunities creates a potential for conflict that will almost certainly outlive the wild African elephant unless the problem is addressed soon.

African elephant poaching is reaching a crisis point. There are no exact numbers on the death toll, but the International Union for the Conservation of Nature (IUCN) conservatively estimated 22,000 elephants were killed in 2012 alone (an estimated 7.4% of the population¹) yielding \$552 million in retail value.² The vastness of elephant ranges, the remoteness of terrain, and the insecurity prevalent in many areas of Africa means large numbers of elephants die in near-complete invisibility, with carcasses not documented until months or years after the fact. Under these conditions, it is possible and even probable that the true rate of poaching is much higher. The scale of ivory trafficking suggests as much: in 2013, TRAFFIC (an investigative division of the World Wildlife Fund) counted 41.5 tons of ivory seized by law enforcement, almost double that of 2011.³ If the interdiction rate is estimated at 10%, this would imply that the true amount of trafficked ivory in 2013 was closer to 400 tons, or roughly 50,000 elephants.⁴ Even this could be conservative given that the so-called “1-in-10” (or 10%) rule for estimating interdiction rates is a Western law enforcement estimate generally applied to more familiar types of contraband, such as narcotics. Ivory transits primarily through African and Asian ports where security screening is less stringent, and where the penalties for wildlife crime are rarely enforced or virtually nonexistent.

Ivory poaching is not a new phenomenon, but given current prices, it is more lucrative and thus more prevalent than ever before. In 1976, ivory was worth US\$5.77 per kilogram, but today its retail value in Asia is over \$3,000/kg.⁵ Growing demand has resulted in an organized and professionalized ivory value chain with three distinct components: poaching, the transport chain, and the retail market. First, ivory is harvested from hunting areas in the forest. Then, ivory is transported from the bush to consolidation points, where it is bundled into larger shipments of 300-1,500 tusks and hidden in standard shipping containers. Finally, it is smuggled through the international shipping system from African ports to Asian markets. This complex logistical maneuver is less centrally directed than often assumed. Some syndicates may direct the trade from start to finish, but most others appear composed of networks of actors who likely see only as far as the next link in the chain.

African actors dominate poaching and the transport chain up until ivory is loaded into a shipping container (“containerization”), usually at or near an African port, at which point Asian organized crime often takes over. This report focuses on the pre-containerization phase, where the harmful human effects of wildlife crime are most evident. It is at this point of origin that ivory poaching exacerbates and perpetuates militarization, increased corruption, conflict, and the breakdown of governance. What we term the “enablers,” or socio-political prerequisites, of poaching are derivative of Sub-Saharan Africa’s most pressing issues: corruption, poverty, hunger, ill-defined land rights, failed states, ungoverned spaces, small arms proliferation, and conflict.

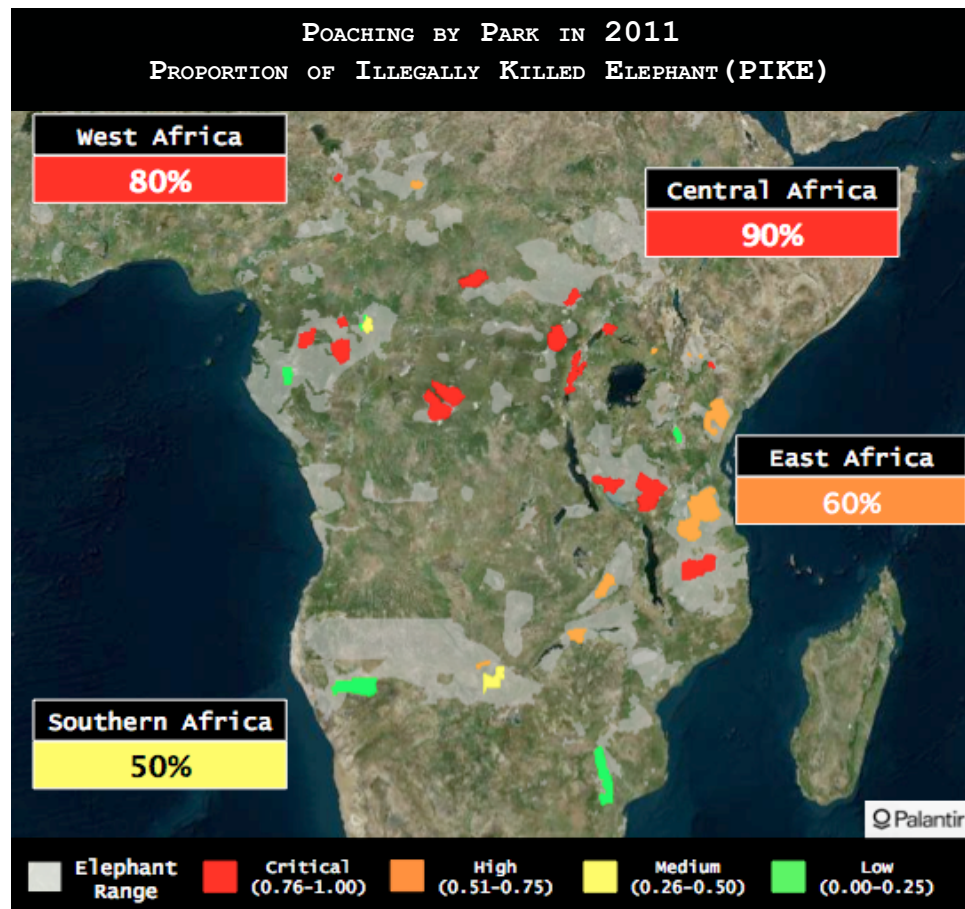
The economics of ivory differ significantly at local and international levels. While ivory does indeed fetch \$3,000 per kilo, this price point is only true in retail Asian markets. Low-level traffickers and poachers are guided more by the prices offered by local middlemen, which

are only indirectly connected with larger, growing demand in Asia. Ivory trafficking networks within Africa have their own distinct economies, which merit close study to form effective wildlife crime strategies.

Any comprehensive solution to the problem of wildlife crime must target each point in the value chain: poaching, trafficking, and the retail market. Government and nongovernment actors are expending significant resources to harden elephant ranges (poaching stage) and to address Asian consumption patterns (retail stage), but these efforts often require years to take effect, time which neither elephant populations nor poaching-afflicted communities can spare. A more immediate complementary measure is to focus on disrupting the supply chain, preventing middlemen and traffickers from realizing profits; this report focuses on the pre-containerization phase of that supply chain.

Poaching Trends: Crisis Levels & Displacing

The current wave of elephant poaching appears to have begun about a decade ago, in the early 2000s in Central Africa. By 2009, the Proportion of Illegally Killed Elephant (PIKE), which expresses the proportion of dead elephants found to have been illegally killed (as opposed to death from natural causes or legal hunting), was rising across the continent and had reached catastrophic levels in Central Africa. By 2011, 5 out of 15 recorded sites in Central Africa were registering a 100% PIKE rate, meaning every single elephant found dead had been illegally poached; at another four sites, the PIKE rate was higher than 87%.⁶ It was once estimated that Central Africa's forests could support over a million elephants.⁷ Today, there are likely no more than 50,000 left, with the vast majority concentrated in Gabon and the Republic of Congo. This decline, which has claimed more than 70% of Central Africa's elephants,⁸ provides a compelling explanation for why, according to IUCN, poaching rates



Adapted from CITES CoPS16 by C4ADS

in Central Africa are leveling off⁹ and displacing into other areas of Sub-Saharan Africa.

Multiple case studies show that ivory poaching is capable of rapid displacement. As Central African elephant populations dwindle, poaching has shifted into East Africa, where elephants are more abundant. Tanzania and Mozambique have recently reached critical poaching levels: as many as 25,000 elephants (66% of the population) were killed in Tanzania's Selous ecosystem between 2009-2013, and over 8,000 elephants (roughly 40%) in neighboring Niassa in Mozambique over a similar period.¹⁰ Gabon and the Republic of Congo (the last major elephant populations in Central Africa), as well as Kenya and Zimbabwe, are all seeing rapid increases in elephant poaching. Warning signs of escalation are also present in still-secure ranges in Southern Africa.

Elephants are killed across Africa with a variety of methods, both primitive and advanced. Some tools are designed to kill in large numbers, such as poison deployed in watering holes or thousands of snares distributed across a wide area. Mobile bands of hunters operate with weaponry ranging from poisoned arrows for silent kills to .358 and .475 large-caliber hunting rifles and military-grade assault rifles.



Source: PAMS Foundation, IFAW, VICE, Nightline, Wildlife Direct

Elephant poaching and trafficking is not uniform. Poaching operations in different areas of the same park employ different organization and tactics, let alone between different countries. Variations in geography, human population density, and transportation infrastructure help determine the nature of poaching, and the movement of ivory through national, regional, and international trafficking channels. Elephant population densities (which are rapidly declining in Central and Eastern Africa) are of particular importance in determining where poaching hotspots currently are, or are likely to be in the future.

The First Wave: Born in War

Ivory has helped fund conflict across Africa for decades. In the late 1970s and 80s, elephants were killed at a rate of perhaps as many as 100,000 per year at peak volumes.¹¹ Much of the killing was driven by a wide array of African armies and militias seeking to feed and fund their forces. UNEP estimates that 40% of intrastate conflicts in the past 60 years have had a link to natural resources.¹² In this regard, ivory is similar to other high-value commodities such as diamonds or gold,¹² but in fact perhaps easier to harvest and transport.

Over the past four decades, elephant ranges and conflict zones have often overlapped, with predictable results. This was especially true in the 1970s and 1980s, an era plagued by a series of bush wars and small arms proliferation. In a single generation, traditional weapons were upgraded for modern assault rifles, as countries such as Muammar Qaddafi's Libya flooded Central Africa with light weaponry. Meanwhile, the Idi Amin regime in Uganda collapsed after invading Tanzania, the Ogaden War erupted in Somalia with Kenya arming in response, and in Sudan, civil war re-erupted with the North pushing south for the natural resources. In Southern Africa, a series of independence struggles and bush conflicts persisted from the 1960s through the 1970s and 1980s, and grew into civil and proxy wars in Namibia, Angola, and Mozambique. Conflict in all these theaters was generally fought far from population centers, deep inside the "bush," within close proximity to elephant habitats.

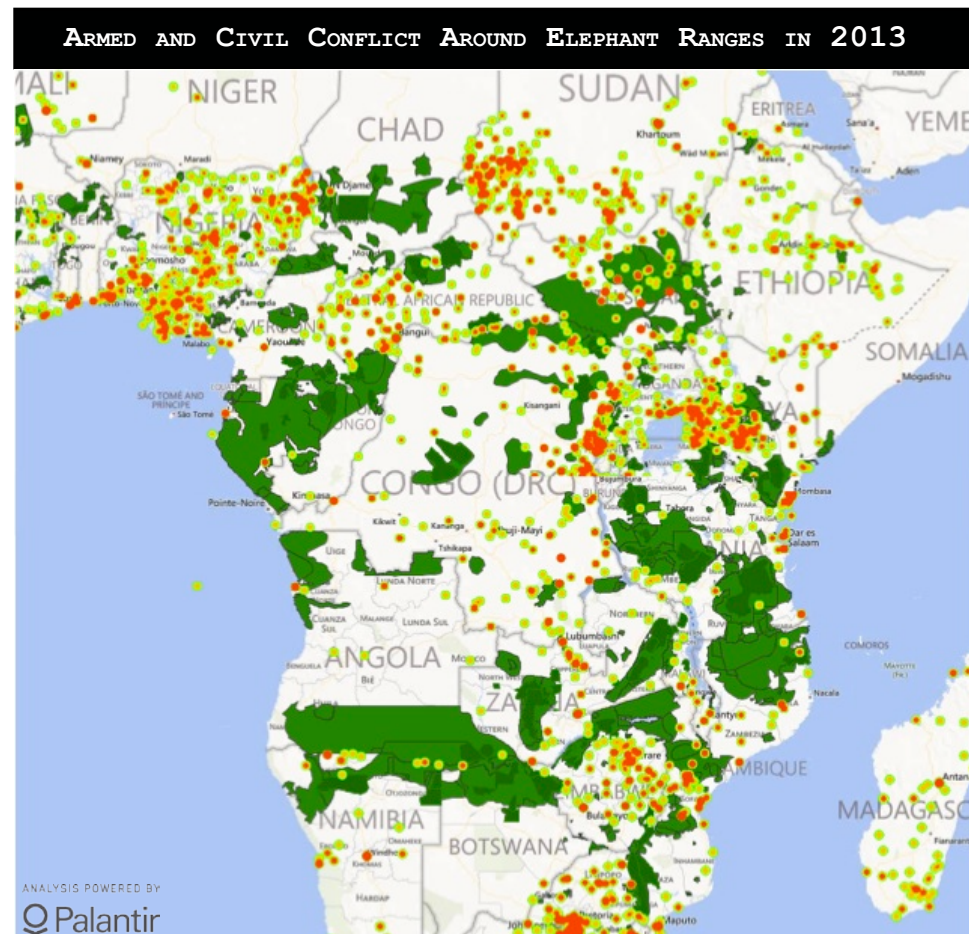
Each of these conflicts has had a devastating impact on elephant populations. In Sudan alone, 12,000 elephants were being killed per year in the early 1980s, as Sudanese forces fed themselves on bushmeat. In neighboring Central African Republic, which has always been a "reservoir of resources" for neighboring countries, the estimated 100,000 elephants in 1976 crashed to as low as 15,000 by the mid-1980s,¹³ while 64% of the elephants in Garamba National Park in the northern DRC were killed by the end of the 1980s.¹⁴ In eastern Kenya, spillover and poaching from Somalia reduced elephant numbers from 20,000 in 1976 to 6,000 by the 1990s,¹⁵ while Idi Amin's retreating army in 1979 passed through and hid inside Murchison Falls Park in Uganda, devastating the animal population. Later in the 1990s, the resource wars continued, as horseback Sudanese poachers armed with Kalashnikov rifles fanned out across Central Africa, while Ugandan, Rwandan, Zimbabwean and other regional armies looted the eastern DRC's abundant natural wealth, including its wildlife.

Much of the killing in the era was designed to fund and fuel wars. However, the nexus between poaching and high-level military criminal networks trafficking in ivory was most dramatically illustrated in Southern Africa, where South African Military Intelligence used ivory and horn on a vast scale to covertly fund proxy wars in Angola, Mozambique, and former Rhodesia. Rhodesian military units such as the Selous Scouts gravitated into poaching as they collected and delivered ivory found on elephants killed by landmines to their contacts in South African Military Intelligence. Eventually, however, the demands grew institutionalized, and the "provision of ivory and other goods appears to have been required by the South Africans as part-payment for their support of the Selous Scouts."¹⁶ Similar arrangements were reported with UNITA in Angola, a story that first broke with the testimony by Col. Jan Breytenbach, founder of South Africa's infamous 32 Battalion. He accused the highest levels of UNITA, along with senior South African intelligence and defense officials, of a "massive extermination campaign" against Angola's elephants that turned the country into a "sterile, lifeless desert."¹⁷ Breytenbach and others named a Portuguese company, Framma Inter-Trading, as having facilitated and directed the trade, accusations that were later confirmed by the Kumblen Commission Report, authorized by the Mandela administration. Released in January 1996, it confirmed that the South African National Defence Force (SANDF) had been involved with Framma from "the womb to the tomb" and that the SANDF "officially, but covertly, participated in the illicit possession and transportation of ivory and rhino horn"¹⁸ with export lines through Johannesburg.¹⁹ Today as few as 1,000 elephants live in Angola,²⁰ down from estimates as high as 200,000 in the 1970s.²¹

The 1970s and 1980s institutionalized ivory as a conflict resource, although it never received the recognition of commodities like blood diamonds or gold. Ivory is portable, cheap to harvest, and does not require static control of territory, while its value, especially today, rivals virtually that of any other bush commodity. As such, it has increasingly become a lifeline commodity for actors who are otherwise excluded from the global financial system. The LRA, Khartoum's proxy militias, al-Shabaab, and others are all under severe economic strain, and ivory has become an easily accessible and valuable component of their funding portfolios. However, isolated conflict actors are not unique in taking advantage of ivory, nor is it simply a commodity of convenience. Political, military, and other high-level corruption and criminal networks continue to expand into the wildlife trade, incentivized by its highly attractive economics. Many of today's conflict actors are concentrated in Central Africa, although modern "conflict" and "commercial" poachers are often difficult to distinguish. Commercial organized crime networks, born from political corruption, can become highly militarized and operate essentially as conflict actors.

The Modern Wave: A Global Criminal Enterprise

Thirty years ago, militaries were able to dominate poaching because they were among the few organizations with the logistical capability to access global markets. Today, the environment is very different. Better infrastructure, technology, and individual empowerment have allowed for bustling boomtowns and the lifting of millions out of poverty, however these factors have also facilitated the vast expansion of illicit transnational economies, including in wildlife. Since 1989, when the trade in ivory was mostly banned, the industry has con-



Source: Adapted by C4ADS from ACLED data; ACLED Data Accessed at: Raleigh, Clionadh, Andrew Linke, Håvard Hegre and Joakim Karlsen. 2010. Introducing ACLED-Armed Conflict Location and Event Data. *Journal of Peace Research* 47(5) 1-10.; IUCN and UNEP. (2014). *The World Database on Protected Areas (WDPA)*. UN-EP-WCMC. Cambridge, UK. www.protectedplanet.net

solidated. Most subsistence or artisanal poaching for supply to local markets has since been co-opted or crowded out by an illicit commercial trade that is monopolized by organized crime, and enabled by government functionaries, security forces, and businessmen. The logistics of ivory trafficking are complex and highly variable across the continent, but there are three distinct phases of wildlife crime - poaching, trafficking, and retail - each increasingly professionalized and dominated by criminal and corruption networks.

During the poaching phase, elephants are killed and their tusks removed. Poachers - often poor subsistence farmers - are recruited by organized crime figures from African bush-towns that act as trafficking middlemen. These middlemen outfit the poachers with weapons and supplies to harvest ivory. At this stage, profits are lowest and adverse human impact highest. Poaching parties comprised of 10 individuals or more are paid as little as \$30/kg for their time in the bush, a minuscule fraction of ivory's potential value at Asian retail prices, or even at prices in intermediate African trafficking hubs. Conversely, marginalized populations living along the peripheries of elephant ranges bear the full brunt of the trade's negative externalities: militarization and banditry, increased petty corruption, and the destruction of tourist-drawing nature reserves that are among the biggest economic assets of rural peoples in some areas of Africa.

Once ivory has been poached, it has to be transported to a retail market, generally in Asia. Trafficking can be roughly divided into two stages, the first of which includes all trafficking activities within Africa, before the contraband is packaged into a container (containerized) for international transport. Here, profits begin to rise, principally accruing to individuals whose actions drive the trade: the middlemen, corrupt politicians, conflict generals, and logistics specialists. Interdiction opportunities are plentiful and have a high chance of imposing losses on a trafficking operation. The second phase of trafficking encompasses all activities after a consignment is containerized. This division is not arbitrary; it is generally at this stage that transnational syndicates and Asian organized crime get involved in the trade.

Finally, at the retail phase, tusks are worked, carved, and sold, generally in an Asian country. Further analysis of retail markets is essential to forging a long-term solution to the elephant poaching crisis, but is outside the scope of the present study, which limits itself to African-level poaching and pre-containerization trafficking.

The ivory trade is a complex logistical enterprise that transports illicit products from the remotest corners of Africa to markets tens of thousands of miles away. Local communities on the forest and savannah periphery do much of the physical hunting, but current levels of poaching could not be sustained without the support of patrons further up the chain. Contrary to common perception, elephant poaching is not "cheap" when it is valued in local terms, and poachers rely on middlemen further up the value chain for weapons, ammunition, rations, and other forms of support. This "seed capital" has allowed illicit criminal networks to indirectly control the scale and location of elephant poaching, as well as indenture local hunters into repeated service.

Professionalization has changed the paradigm of ivory poaching from that of an "economy of proximity" to a networked transnational enterprise, in which the oft-cited leading drivers of elephant poaching - poverty and East Asian demand - do not adequately explain the situation. Poverty, of course, plays a role, but nearly all of rural Africa is poor in absolute and relative terms, and poaching is occurring with similar intensity in countries as diverse as Gabon, Tanzania, and the DRC. Moreover, while East Asian demand undoubtedly fuels the ivory trade as a whole, local hunters do not frequently source directly to East Asian organized crime groups. They are instead incentivized by more local sources of demand in trade and transportation hubs around elephant range areas. As such, end-user demand and retail prices in East Asia can only offer so much insight; in many areas hunters receive less than 3% of end-value, and thus it is the relative level of profit distribution offered by the African middlemen that affects the price of ivory within Africa.

Conceptualized broadly, the ivory trade is a giant illicit resource transfer from Africa to Asia that is robbing local communities of an important source of potential wealth, destroying the potential of critical economic sectors such as tourism, and financing a wide range of predatory and corrupt actors across the continent. Locals incur the majority of risk, and bear the majority of costs, but receive the minority of profits. Local ‘subsistence’ poachers have rarely benefited from ivory’s rising price, or ever captured enough value to move beyond roles as hunters. Rather, organized crime groups have responded to the rising end-price of ivory, and from the top-down increasingly worked to create vertically integrated poaching and trafficking operations to capture and benefit from the labor of rural and forest communities.

IVORY HOTSPOTS AND FLOWS			
<i>LIST IS NOT EXHAUSTIVE, AND INTENDED TO HIGHLIGHT LIKELY BROAD FLOWS</i>			
Poaching Area	Poaching Pressure	Approximate Elephant Population	Main Ivory Exit Routes
DRC	High, Decreasing	4,704	Uganda, Kenya, Sudan
CAR/Chad Northern Cameroon	High, Decreasing	2,131	Sudan, Libya
Gabon/ROC Southern Cameroon	High, Increasing	74,584	Togo, Cameroon, Nigeria
Tanzania Northern Mozambique	High, Increasing	74,629	Tanzania, Kenya, Mozambique
Southern Mozambique/ South Africa	Low*	23,889	Mozambique, South Africa
Kenya	Medium, Increasing	27,136	Kenya
Zimbabwe	Medium, Increasing	51,141	Zimbabwe, Mozambique, South Africa

** In South Africa, the trade is primarily in rhino, where poaching levels are high, and rising.*

Enabling Factors Across the Continent

In general, actors up the ivory value chain are able to successfully “capture” their poorer neighbors, turning artisanal hunters into the agents of a transnational criminal enterprise, in no small part because societies across Africa are already affected by conflict, poverty, and corruption. However, ivory poaching is not a uniform enterprise, and local trends play an important role in influencing the nature of elephant poaching on the ground, as well as the manner in which poachers interact with middlemen, “kingpins,” and individual traffickers.

Additionally, there are several non-intuitive current, emerging, and potential poaching hotspots that receive inadequate attention compared to the active warzones. For example, though the country itself is relatively stable compared to its neighbors, Cameroon’s last elephants are trapped between waves of conflict and spillover from all directions, including horseback poachers backed by the Sudanese military, armed groups and refugees spilling out of the Central African Republic, and Boko Haram forces moving out of Nigeria into

Cameroon's far north. Similarly, cross-border poaching activity by Somalis in Kenya receives attention because of possible links to al-Shabaab, but this masks the significant domestic insecurity and violence internal to Kenya, which frequently occurs in immediate proximity to elephant ranges.

In short, large tracts of rural Sub-Saharan Africa are highly insecure for both humans and elephants, but different enablers, key actors, and poaching models play out across each theater. This report examines the following enabling factors in detail:

1. A series of ***Failed and Fragile States*** across Central Africa allows for huge swathes of ungoverned territory to be exploited by violent armed groups. Militias of **North Sudan**, complicit in Khartoum's genocidal campaign in Darfur, have for decades been financed by ivory proceeds. Other conflict-poaching actors in the region include the Lord's Resistance Army (LRA), and the various armed groups in the Central African Republic (CAR) and South Sudan.
2. A ***Conflict-Crime Nexus*** perpetuates and increases insecurity in the **Democratic Republic of the Congo**. Political, military, and militant actors illicitly exploit the DRC's natural wealth, perpetuating violence and undermining the rule of law. Ivory has been an important component of these groups' financing cycles, and has bred destabilizing alliances between security forces and the militants they are tasked to fight.
3. For individuals and entities excluded from the global financial system, the need for alternative streams of revenue draws them toward wildlife crime as a means of ***Sanctions Evasion***. In **Zimbabwe**, sanctioned Mugabe cronies in the government, military, and intelligence agencies loot protected areas while bilaterally making natural resource deals with Chinese investors. Hunting and safari areas are being seized, with a high risk that they will, or are, being used as covers for ivory and horn poaching operations, while environmentally sensitive areas in close proximity to elephant populations are being auctioned off for Chinese exploitation with little transparency.
4. Outside of active conflict zones, in places like **Tanzania**, the presence of ***Political Corruption*** creates a high-risk vector for the potential looting of national wealth for personal gain. A history of corruption in key environmental ministries and a unique system of allowing private individuals to manage wildlife ranges with little oversight exacerbate this risk.
5. In rural **Kenya**, the ***proximity*** of marginalized, impoverished, and well-armed pastoralist communities to existing trafficking infrastructure creates the conditions for emerging poaching hotspots. The widespread availability of firearms and ammunition, much of it likely leaking from government forces, exacerbates the problem.
6. Evidence from multiple anti-poaching operations in **Gabon and the Republic of Congo** suggests that ***Expanding East Asian Resource Extraction***, in close proximity to wildlife ranges, provides a vector through which local poachers and middlemen can easily and quickly meet increasing demand.
7. The ***Power of Price*** is evident across the continent, but South Africa, with some of the most capable security and ranger forces, offers a unique case study. Despite all efforts to secure the border, poaching gangs from Mozambique are devastating rhino populations after decimating their own, a possible harbinger of the coming displacement of elephant poaching, and its associated security implications, into Southern Africa.

Citations

We used datasets from ACLED and IUCN frequently throughout our report for analysis of elephant population distribution and conflict frequency.

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The Ivory Value Chain

The ivory value chain is an organized, three-phased system. It must be disrupted at all points, but the supply chain (as opposed to poaching or retail) is a point of vulnerability. Price analysis along the value chain can provide important insights on ivory flows and can help measure enforcement success.

As poaching has militarized, ivory trafficking has professionalized, now capable of transporting contraband from the remotest corners of the African bush to East Asian markets thousands of miles away. Conceptualized in broad terms, there are three major components to the ivory value chain: poaching, trafficking, and retail. African actors are dominant from the poaching phase to the point when ivory is consolidated and hidden inside a container, while Asian and other organized crime groups control the supply chain from containerization all the way through the shipping and transport systems to market.

The ivory trade can be attacked at any of these stages, but each has unique difficulties and time sensitivities. Securing elephants with more rangers and drones is expensive, and the mismatch between ivory's value and local incomes ensures that there will always be a nearly inexhaustible supply of poachers. Further, applying hard security measures, such as injecting weapons and money into already failing governance and security systems, may only exacerbate underlying problems and create new conflict actors in the future.

Demand-reduction on the retail end is also problematic, primarily due to the time constraint. Demand reduction is the only permanent solution for a trade that is driven by black market economics, but changing cultural attitudes and consumption preferences is a very lengthy process that can take decades to materialize, and moreover is not conducive to dictation by outsiders. Given current rates of poaching, the time lag for demand-reduction is simply too long. Per the latest estimates, 7.4% of the elephant population is being killed annually, at an accelerating rate, shrinking the timeframe for elephant survival across most of the species' range to within 10-15 years.

Disruption and suppression in the intermediate phases, however, is likely to be a key point of vulnerability in the ivory trade system. Targeting syndicate profits and focusing on increasing the rate of seizures can induce higher levels of operating cost and risk, forcing syndicates out of business or displacing them into an alternative trade. Supply chain disruption is particularly attractive as it targets those actors who benefit the most from the trade: the traffickers, middlemen, and logistics specialists who are drawn by illicit profits and not poverty. While supply chain disruption is likely to be a high-impact short-term strategy, it is inherently temporary. Poaching will displace, middlemen will shift areas of operation, trafficking routes will change, and law enforcement will have to adapt accordingly.

The simplified conceptualization of the "supply chain" obscures significant complexity, and there are multiple intermediate steps between the bush and the market:

- Extraction areas are the towns along the forest where ivory is sourced, which generally also provide labor for the hunting groups.
- Consolidation points are reached through a middleman or a series of middlemen, who negotiate with local officials, and collect, sort, and transport increasing amounts of ivory.
- The final consolidation point is generally the point of containerization, where ivory is packaged and hidden inside a shipping container, and the paperwork is prepared for international transit.
- Export and import points include the ports and transportation hubs through which ivory is loaded, smuggled through security screening, and unloaded to finally reach a carving center that creates the final product and distributes it to retail markets.

Few syndicates 'vertically integrate' to control all these different logistical points, or have all the individuals and tools required to fulfill all these tasks in-house. Instead, an array of actors work together formally and informally, in complicated networks at varying stages of professionalization.

This report primarily examines the phase prior to containerization, to focus on the physical

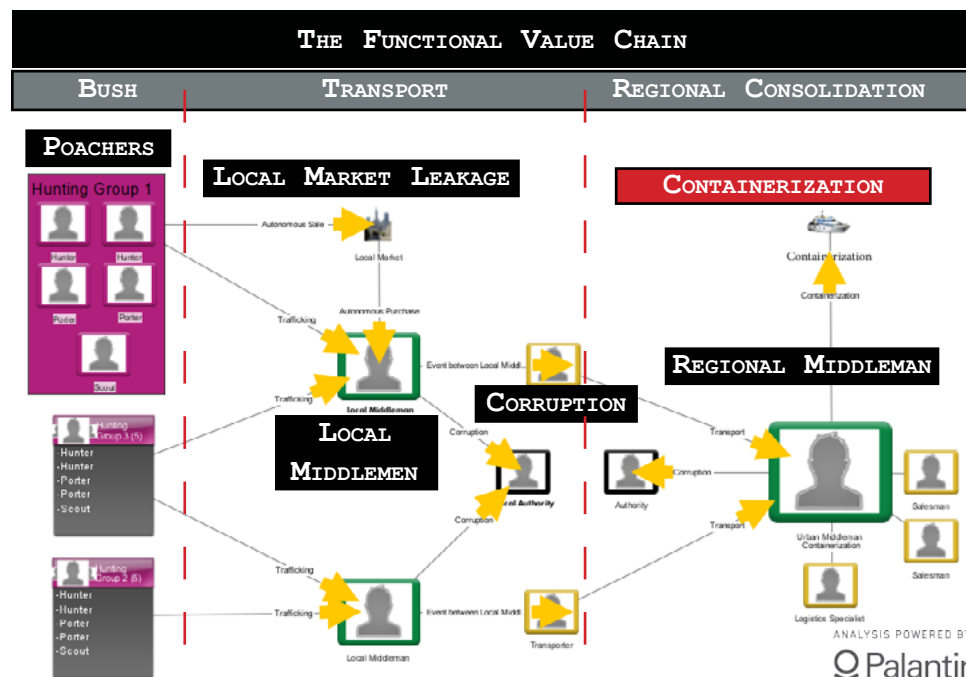
poaching actors and their direct enablers. However, it is impossible to fully decompartmentalize the poaching from the local trafficking or the middlemen who organize the containers and the transnational trafficking. Where appropriate, we attempt to go into as much detail as possible.

Organization

Poaching has evolved from an “economy of proximity,” in which the primary determinant of elephant poaching was access to elephants, into an “economy of networks” that links together multiple regions, skillsets, and areas of control within a single ‘syndicate.’ It appears relatively rare for transnational traffickers to source directly from the forest periphery, or from actual poachers. Instead, a series of local middlemen funnel supplies to a “regional middleman” who serves as an intermediary between local supply and international demand. These individuals or entities coordinate relations between the African and East Asian end of operations, and generally manage all operations prior to containerization. They can be powerful poaching “kingpins” in their own right, or they can merely be nodes, albeit important, in a larger network. Regional middlemen or the African kingpins serve as ‘patrons’ to various local middlemen and hunting groups, directly or indirectly controlling or coopting them to secure reliable and regular supply.

The role of a patron, namely a person (or organization) who supports and enables operations by providing equipment, access, and a competitive local price, is crucial across all poaching theaters. The provision of arms, ammunition, rations, park-level intelligence, and higher-level corruption, cannot be underestimated. Price, however, appears to be the most important means by which syndicates control and co-opt local ivory poachers and traffickers. African patrons, by virtue of their access to transnational traffickers and their control of local ivory flows, can command significant shares of profit, and can afford to distribute higher than average wages down the value chain. Their ability to outbid local demand (in addition to available recourse to violence or coercion) allows relatively smaller numbers of syndicates and individuals to dictate the terms of regional poaching and indirectly control its scale.

Ultimately, poaching itself is somewhat spatially fixed, in that it depends on proximity to elephants, with hunters generally drawn from the surrounding area. However, middlemen



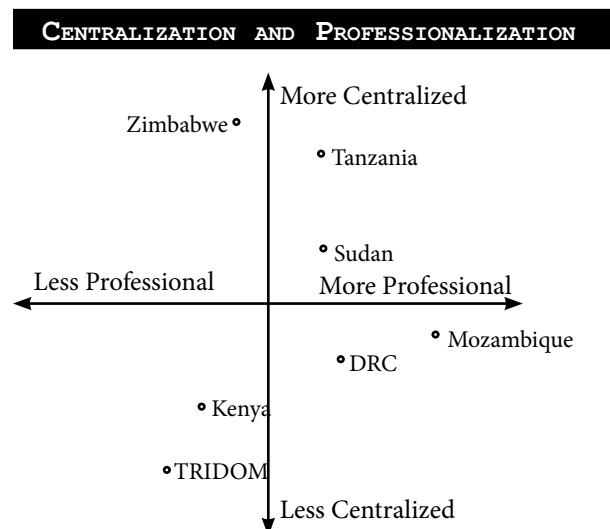
are not necessarily fixed in their areas of operation. Depending on the nature of their access, middlemen can patronize hunting operations across a wide swath of territory or focus on specific ranges: Sudan-sponsored poachers cover immense amounts of territory to target isolated elephant ranges, whereas in Tanzania there is growing evidence of very concentrated hunting in specific sectors of parks. The ability to adapt poaching operations and choose optimal trafficking routes is generally a feature of increased network organization and capability. There are likely limits to this adaptability (for example a Ugandan regional middleman may easily displace his poaching networks across countries in Central Africa but would find it harder to operate outside the region), however there is some evidence of extreme displacement, such as West Africans trading in faraway Mozambique. The most vertically integrated syndicates may have no regional boundaries at all.

In the functional sense, there are strong commonalities between poaching networks across the case studies we examine. However, important variations exist in the way that networks are organized. Local socioeconomic conditions, such as the availability of labor, the price of weapons, the availability of infrastructure, and the presence of non-state organizations capable of moving into poaching (such as militant groups) influence the level of centralization and professionalization a network is able to achieve. These two factors determine the rough shape of a poaching network, as well as the prevailing profit distribution model within it.

Professionalization is characterized by increased organization, increased use of sophisticated weapons, and increased access to transnational trafficking networks. Centralization is the direct control over the poaching on all levels of its organization by a central patron figure. Two simple models serve as extremes on a cartesian plane of professionalization and centralization.

In one extreme, the “landlord model,” the poaching patron essentially owns or controls elephant ranges, and can either directly control the hunting or rent out controlled access. Such a network generally has a hierarchical form of organization with static control of territory and strong direct control over hunting parties. The model is best associated with the case studies of Tanzania and Zimbabwe, where powerful businessmen and politicians own licenses or exert strong influence over hunting and safari concessions, and thus seem to be able to control the scale and manner of hunting on their lands.

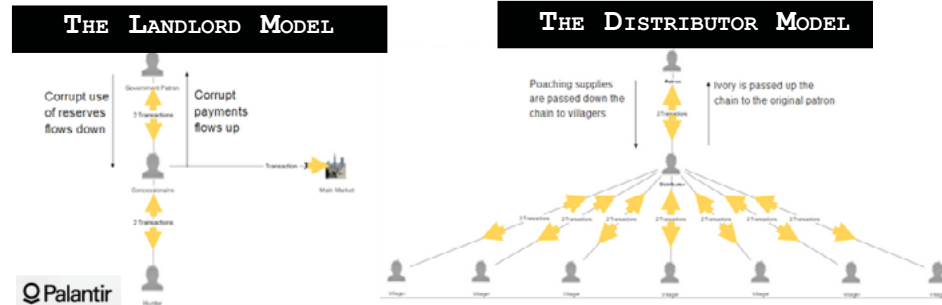
On the other extreme, the “distributor model” features a patron who supplies enabling equipment down the chain, but exercises little direct control over the hunting. Variations of distributor model are seen in virtually every case study we examine and can overlap alongside the landlord model. In Zimbabwe, in Hwange National Park, a notorious incident in 2013 involved the distribution of almost a ton of cyanide to several villages. The patron enabled the villagers to kill hundreds of elephants, but the actual killing was done at the villagers’ discretion, with the patron only coming later to collect tusks. Conflict generals in



the DRC also trend closer to the distributor model. They supply arms and ammunition to militant groups, and expect ivory to flow back up the chain to their criminal networks, but appear to have little concern over how and where the actual hunting occurs.

In truth, few studies align neatly and most actors navigate a murky nexus of control versus cooption. In nearly all cases, however, the provision

MODELS OF POACHING NETWORKS



of equipment implies some form of payback, and more often than not, the terms of trade are weighted against poachers. Many business models require poachers to essentially 'rent' the equipment, which can quickly indenture them into criminal networks.

Incentives

Ivory's rising value is the primary incentive drawing individuals into the ivory trade. Measuring prices along the value chain, and the relative profit distribution within networks can offer important insights into how poaching is manifested in different regions. The price of ivory in dollar terms, however, is a misleading measure, as it can obscure local purchasing power, and miscast the effective value of ivory in local markets. Especially at the bottom of the value chain, where profit distributions are a small fraction of retail value, it is important to examine what ivory's value means in the context of local economic activity. A poacher on the forest periphery will not receive the \$3,000/kg transnational traffickers might receive, or even the \$400/kg that a middleman in Mombasa might command, but will make closer to \$50-100/kg for his effort. However, even this small profit distribution can constitute a very significant wage in local purchasing power.

In reality, poaching earnings can be even smaller. Hunting groups may be composed of as few as three individuals; a hypothetical successful 3-man hunting party being paid \$50-100/kg for their work would make at maximum \$33/kg each. This is still a sizable amount in local terms, but is a minuscule portion - between 1.6% and 3.3% - of end-value. Even this estimate may overstate the true value. Isolated areas near national parks where ivory is harvested are still unconnected to local, let alone regional or global commodity chains, and a great deal of economic activity is still conducted through bartering. Especially in Central Africa, it is not uncommon for poachers to be paid nothing in physical currency, but instead be loaned weapons, a significant investment, and in return allowed to keep the meat of any animals they kill, with perhaps a small bonus after successful hunts. Different models of centralization can further affect profit distributions; more centralized syndicates with skilled poaching employees are likely to have higher and more fixed wages as compared to informal negotiations in less centralized models.

At the network level, ivory is still an attractive and lucrative commodity that has several advantages over alternative resources. Ivory is a portable resource that has low sunk costs relative to other extractive industries. It requires only transient control or access to territory, unlike, for example, illicit gold, whose owners have to invest in costly and static mining infrastructure, and then often have to defend mines against other armed groups. By contrast, at the bush level ivory is highly attractive as a source of financing to mobile groups such as the Lord's Resistance Army that do not have access to established markets or infrastructure. As such, ivory has also grown into a lifeline commodity for groups starved of other financing opportunities. Finally, and perhaps most importantly, wildlife crime is not treated as seriously as other forms of illicit trade in Africa, with international attention and penalties paling in comparison to those meted out to conflict miners or human traffickers; ivory thus has attractively high levels of impunity compared to alternative illicit activity.

LOCAL INCENTIVES AND PURCHASING POWER (EASTERN DRC)



ONE TUSK

- **Average Weight:** 3.8kg (CITES)
5kg - Rough
 - **Bush Value/Kg (DRC):** \$100
- Tusk = \$380-500**
- **Hub Value/kg (Kampala):** \$250
 - **Retail Value/Kg (Asia):** \$3,000

PURCHASING POWER

GDP/Capita: \$422 (2012)
Local Wage (monthly): \$167 (miner)
 \$97 (top army)
 \$50 (official)

Local Retail Prices (Bunia)

- Flashlight \$2
- Local Beer (Bottle) \$1.50
- Measure Local Rice \$1.15
- Measure Corn Flour \$1.43
- Measure Cassava Flour \$0.85
- Salted Fish \$3.80
- Can of Palm Oil \$25

Weapons Markets

- AK-47 Rifle (New) \$200-250
- AK-47 Rifle (Used) \$20-50
- Single Round \$0.05-11

Sources: Southern Africa Resource Watch, Enough Project, UNECA, FAC/WFP Food Security Cluster November 2013, UN Panel of Experts, World Bank 2012, Small Arms Survey, Local Sources

INCENTIVES COMPARISON



CONFLICT IVORY

- **Low Sunk Costs**
- **Transient Control of Territory**
- **Niche Industry**
- **Portable**
- **Higher Impunity**



CONFLICT GOLD

- **High Sunk Costs**
- **Static Control of Territory**
- **Competitive Industry**
- **Portable**
- **Lower Impunity**

Costs

The act of killing an individual elephant can be fairly rudimentary, however an organized poaching operation can quickly get quite complex. An ambitious poaching expedition is long and employs several people, while equipment, logistical, and access costs can quickly mount up to amounts beyond the capability of impoverished local actors. Detailed studies by IUCN found, for example, that in the Central African Republic, a single .458 caliber round could cost as much as US\$20 each, while AK-47 users in Cameroon often expended 60-500 rounds each hunting trip, which can rack up costs of over US\$100 on ammunition alone.¹ None of these costs are easily borne by locals. Moreover, contrary to common perceptions, a firearm constitutes a significant investment for nearly all would-be poachers. Africa is not "awash" in firearms. A modern weapon is a highly valuable commodity, and prices even in conflict areas are substantial compared to local incomes. As a result, the

provision of firearms, ammunition, rations, and other poaching-related equipment by a middleman is the primary way in which actors further up the value chain incentivize and indirectly control local poaching. This patronage and provision of supplies, particularly appropriate weapons and ammunition, is a common theme across regions, from Mozambique to Gabon.

**FINANCING A POACHING EXPEDITION
(RURAL CAR, 2011)**

• Weapon	\$100-150
• Ammunition	\$20
• Bribes	\$10-20
• Transport	\$40
• Labor	\$13/person
• Provisions	\$10/day
Total	\$200-300

Source: IUCN, Small Arms Survey

Poachers endure other costs not easily expressed in dollar terms. Poachers must be willing to spend sizable amounts of time in the bush, anywhere between 72 and 750 hours for a commercial hunt,² and thus incur sizable opportunity costs in their forgoing of alternative economic activity. Others may spend considerably more; the Sudanese poaching parties for example spend the entire dry season on task, time that could also be spent on raiding other villages and resources. In addition to opportunity cost, the poachers' cost calculus includes a risk-reward calculation – the probability of finding elephants, a sizable risk of injury in the forest, the possibility of confrontation with other armed groups, and the likelihood of enforcement action by authorities are all measured against the price received from a middleman. At current trends in most areas, enforcement costs do not appear to be high enough to serve as an effective deterrent, but even if they were, given current profit distributions, there is still a sizable cushion for the middleman to bid up price and offset increased poaching risk.

Following Ivory & Measuring Disruption with Price

Mapping local prices and local routes with extreme precision is notoriously difficult, and ultimately probably futile. Precisely and accurately gauging prices of tusks or a kilogram of ivory requires establishing contact networks, venturing into difficult to reach, often-isolated parts of Africa, and locating and talking about illegal activity with reluctant interlocutors. Similarly, bush routes can change depending on weather, the individual poacher, enforcement action, or terrain. However, broader attempts to identify trends of relative pricing along known value chains can provide an understanding of ivory flows, and suggest optimal points for interdiction. Price mapping pre- and post-seizures can also offer important insights into the level of disruption and the recovery period inflicted upon syndicates by law enforcement. (The local ivory prices referenced in this study were collected across multiple interviews in 2013 and 2014).

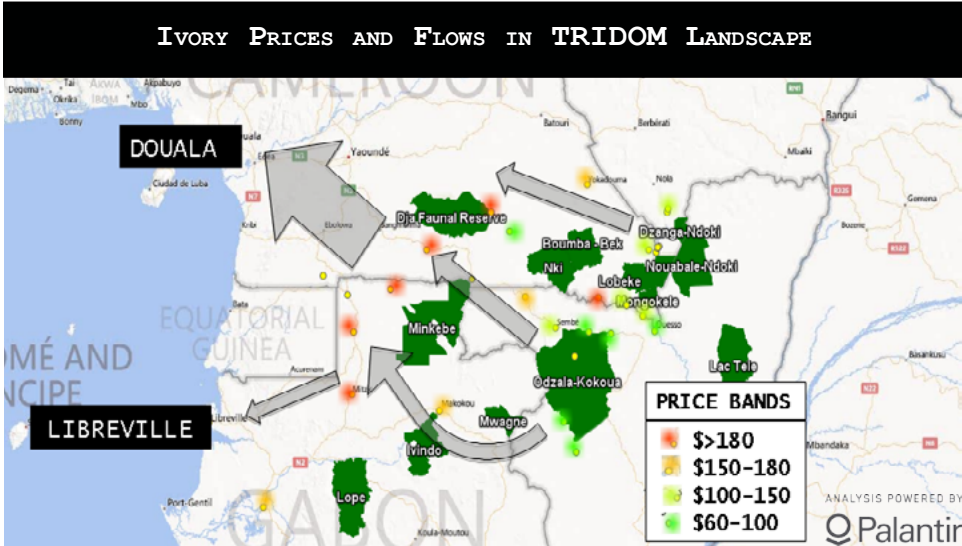
Ivory's value is lowest in the isolated, infrastructure-poor areas near the national parks where it is harvested, and steadily increases as it is trafficked towards urban consolidation and containerization hubs, reflecting in part the increased cost and risk incurred to move the product. At no point do African prices approach East Asian retail prices; however, there is a very significant increase in price between the forest periphery and an export point. A

IVORY PRICE INCREASES ALONG THE VALUE CHAIN

Village (Poaching Hub)		Local Urban (Consolidation Hub)		Regional Urban (Export Hub)	
Name	Price	Name	Price	Name	Price
<i>West Africa</i>					
Etoumbi	\$30	Yakodouma	\$172	Lomé	\$350
Kika	\$62	Moloundou	\$200	Douala	\$400
Mlelekouka	\$58			Libreville	\$100
Ouessou	\$54.5				
<i>East Africa</i>					
Rungwa Area	\$60	Isiolo	\$100	Addis Ababa	\$275
Tsavo Area	\$120-180	Nanyuki	\$100	Dar es Salaam	\$400
				Kampala	\$200
<i>Central Africa</i>					
N'dele	\$34	Arua/Ariwara	\$150		
Chinko Area	\$60	Kisangani	\$225		
Nia-Nia	\$100	Bangui	\$120		

Source: Author interviews with WWF, LAGA, KWS, Chinko Project, African Parks, Conservation Justice

sample compilation of prices that highlight the three major phases - local forest periphery village prices, local hub consolidation prices, and finally the regional export hub price - is included above. The data are of course, imperfect, but are sourced from researchers who demonstrably visited the locations from which they reported. Similarly, as can be seen in the TRIDOM flow map provided below, simply following ivory prices can reveal the logis-

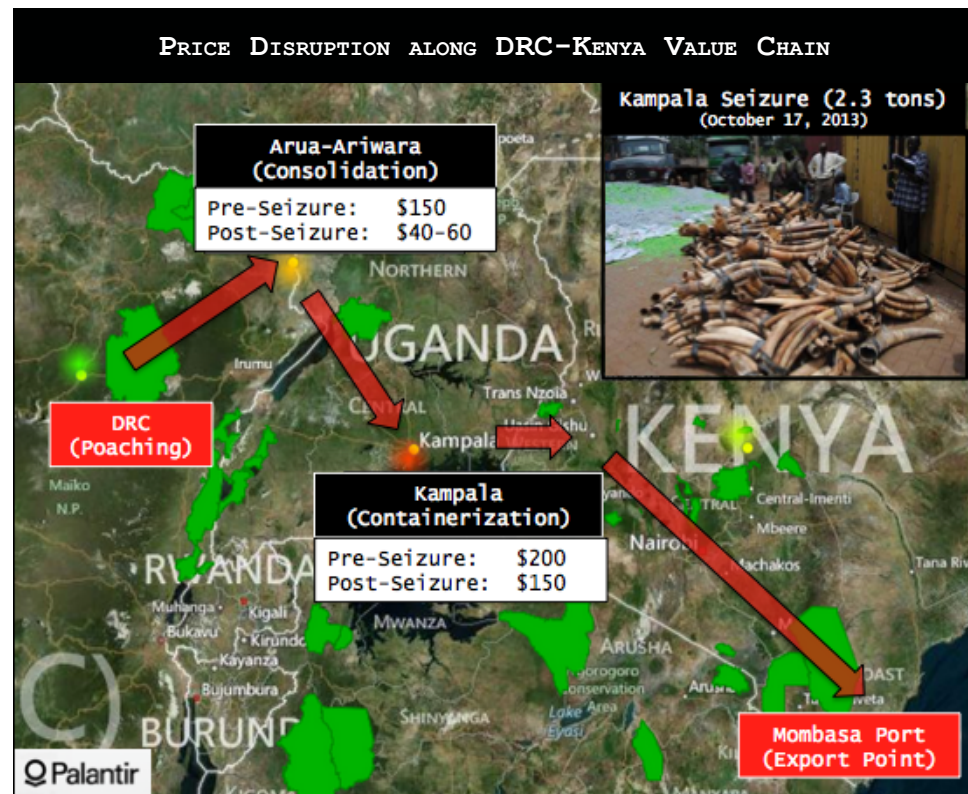


Source: Author interviews with WWF, LAGA, Conservation Justice

A careful measurement of price dynamics can also help determine areas where ivory consolidation occurs, and where enforcement action could be most fruitful. There are a limited number of markets and middlemen that local poachers and traffickers can access, and as a result, ivory prices in one location appear heavily dependent on demand from the next link in the value chain. Due to the lack of substitute markets, the dearth of transport infrastructure, and the difficulty of establishing new contacts in a fairly niche illicit trade, ivory traffickers do not appear capable of easily or quickly rerouting consignments in the event of a disruption in their principal market. Ivory prices are thus responsive to disruptions further up the supply chain, although the level of debilitation and the recovery period may vary between syndicates and regions. The Arua-Ariwara case study provided below provides a compelling example of a situation where following major ivory seizures in a traditionally safe trafficking hub, traffickers appear to have temporarily divested out of the trade, rather than attempt to shift logistics hubs or run the risk of arrest and interception. Relatively small increases in operating risk within principal trafficking hubs or markets may thus provide disproportionate impact to discourage or at least temporarily mitigate local ivory flows.

The Arua-Ariwara Case Study

Ariwara and Arua are cities situated across from one another on the border between Uganda and the DRC. Both cities have a population of around 60,000, and together form a hub of cross-border trade, where merchants from Uganda, South Sudan, and the DRC meet to trade in cattle, raw materials, and other goods. In January 2014, the UN named Ariwara as one of the main centers of the illicit gold trade in the DRC.³ It has also been identified as an important waypoint along the supply chain for ivory flowing out of the Northeastern DRC en route to Kampala for containerization. In 2013, two large ivory seizures in Kampala and Mombasa port were followed shortly by significant ivory price shocks within Arua and Ariwara.



Source: C4ADS conversations with Kristof Titeca

In July of 2013, 3,287 kg of ivory were seized in Mombasa port. This seizure, which was later found to have entered through the Malaba checkpoint on the Kenya-Uganda border, was followed by a decline in ivory prices in Kampala, from approximately \$200 to \$150/kg. The price depression extended farther down the supply chain as well; prices in Ariwara and Arua fell from about \$150 to the \$80-120/kg range.⁴

In October of 2013, in the Bweyogerere neighborhood of Kampala, 1,903 kg was seized from a truck exiting a warehouse, believed to be on its way to the Kenyan border.⁵ This seizure was one of the first, and certainly the largest, ever to have taken place inside Uganda, and it was followed by a collapse in demand for ivory in Arua and Ariwara, which as of November 2013 traded at approximately \$40-60/kg.

The sensitivity of the ivory price in Arua and Ariwara to ivory seizures in Mombasa and Kampala indicates that the latter two cities are most likely the principal transport points for ivory coming out of the DRC. A collapse of almost 60% of original value suggests a major disruption to a principal market, and suggests that ivory traders had few alternatives to reroute their shipments to Kampala. This could be as a result of multiple factors: low infrastructure availability from the northeastern DRC, relatively low network resilience, and low elephant densities that prevent shipments from being easily reconsolidated.

The timing of the price fluctuations indicates the importance of perceived risk calculations by traffickers. After the Mombasa seizure, prices fell only marginally in Arua and Ariwara. It was only following the Kampala seizure that the price in ivory collapsed. Kristof Titeca, a Belgian researcher who collected the price data and has published extensively on illicit economics in the region, posits that this is because the Kampala seizure introduced a far more powerful element of uncertainty into the trafficking calculus. Kampala had previously been a secure hub with low risk of enforcement, but once denied a principal transit point, it seems traders acknowledged that the immediate-term risks outweighed the benefits, providing direct impact far down the value chain, possibly extending even to the forest periphery towns where Arua and Ariwara source.

Citations

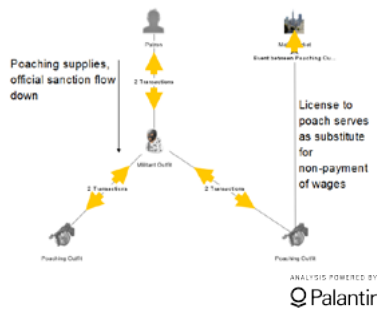
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Sudan: Failed States & Ungoverned Corridors

Militias linked to the sanctioned government in Khartoum are financing military operations and atrocities with ivory, and are today operating more than 600km outside North Sudan's borders.

Sudanese militias linked to the sanctioned government in Khartoum are financing military operations – including atrocities in Darfur – with ivory poaching. Sudanese hunting expeditions are today operating more than 600km outside North Sudan's borders into Chad, Cameroon, Central African Republic (CAR), and northern Democratic Republic of the Congo (DRC) in order to poach Central Africa's remaining elephants. These large, well-armed groups, whose origins can be traced to the Sudanese civil wars, are born of and contribute to conflict. They helped poach the northern white rhino into extinction in the 1980s, and have contributed to a severe decline in local elephant populations and a continued lack of basic security in their operating areas. The profits they have reaped from ivory have likely helped enable tribal conflict, as well as allowed the government in North Sudan to mitigate the effect of international sanctions in funding its proxy militias.

**DOMINANT MODEL :
THE MOBILE LANDLORD**



Sudanese poaching outfits exhibit a high degree of centralization as agents of existing military and tribal groups. Using highly coordinated logistics, effective infantry tactics, and good local intelligence, they are among the most militarized poaching organizations in Africa. Due to these superiorities, Sudanese groups are able to roam vast distances and occupy them for the duration of their poaching activities, acting as a temporary “landlord.”

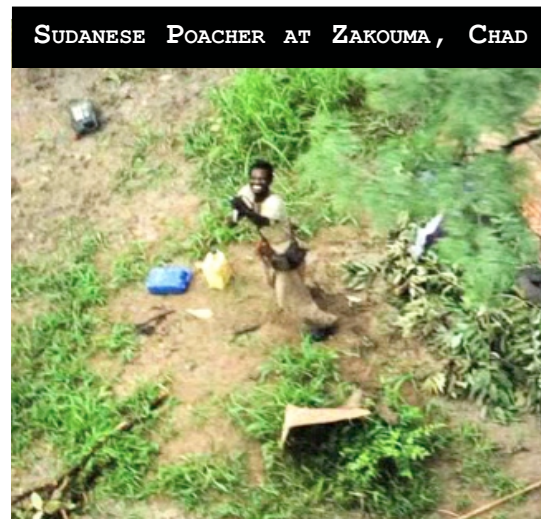
Over the past decade, there has been a severe decline in Central African elephant populations. Between 2002 and 2011, elephant populations fell by 62%, with a range contraction of about 30%.¹ According to the latest estimates by the International Union for the Conservation of Nature (IUCN), as few as 8,000 elephants are still alive in populations outside Gabon and the Republic of Congo,² two of the last countries outside Sudanese operating areas. This is a catastrophic decline from the 130,000 elephants that ranged in (what is now) South Sudan alone in 1986,³ while the formerly 50,000-strong herds of Chad have been reduced to as few as 500 elephants today.

A primary cause of this decline is intensive poaching by Sudanese militias. The Arab tribes of North Sudan, the backbone of the Janjaweed militias, have been making ivory runs through Central Africa for decades, but their scale expanded through the 1990s and, since 2009, so has their operational range. Some of the continent's most notorious recent massacres have been attributed to these groups. These include Bouba Ndjida National Park in Northern Cameroon in 2012 where nearly 450 elephants were wiped out in a single incident, Zakouma National Park in 2012 where five rangers were murdered, and in Dzanga Sangha in the southwestern Central African Republic (CAR) in 2013, where shooters massacred 26 elephants at a UNESCO World Heritage Site. Today, raiders out of Sudan are traveling over 600km of desert and forest to reach the last few pockets of Central African elephants, well outside their traditional hunting areas.

Poaching into Extinction

Most elephants within these areas are already extinct, primarily due to poaching. Militarized Sudanese poachers have perpetrated a three-decade long poaching spree, with operational ranges expanding as elephants die out. They have been assisted by a range of actors and by widespread bushmeat hunting, the practitioners of which they enlist in support of their ivory poaching operations.

In the Congo Basin, a volume of bushmeat equivalent to 4 million heads of cattle is extracted from the forests every single year.⁴ The civil wars between 1983 and 2005 decimated local wildlife as armies fed themselves off bushmeat, while the Sudanese were routinely implicated in large-scale poaching incidents through the 1990s, particularly in Chad. Groups reported as “Sudanese” often encompass a broad array of actors including Arab Darfuri tribes, Chadian pastoralists, and Muslim militiamen from the northeast CAR, all of whom have been tied to conflict in their respective countries, as well as poaching. As a result of these combined pressures, today the Sudans have been almost entirely stripped of once-huge herds of big



Source: Mike Nichols, National Geographic

game like elephants, buffalo, giraffe, and zebra. South Sudan's last elephants are found in pockets east of the Sudd marshlands, areas where the civil war never fully reached, and where the Northern horsemen could not ride.

North Sudan is closely tied to the ivory trade. Major cities like Omdurman and Khartoum are ancient carving centers, clearing houses, and markets for ivory. They have long serviced two of the largest historic African ivory markets, Egypt and Ethiopia, as well as provided transit to markets in the Gulf and throughout the Arab world. Before World War I, ivory accounted for as much as 10% of Sudan's total exports,⁵ and as recently as 2005, a survey found a thriving ivory market in North Sudan, counting over 11,000 pieces of ivory in the souvenir shops



Source: Sudan AECCG Sudan Elephant Conservation Plan

of Khartoum and Omdurman, and over 150 ivory carvers, mostly situated around Omdurman.⁶ However, domestic Sudanese demand for ivory is limited and traditional demand in markets like Yemen has largely been eclipsed by East Asia. To some extent, this vacuum may have been filled by a growing Chinese migrant population and exports through the region's major deep-water port at Port Sudan on the Red Sea. Opacity in the port's operations make this factor difficult to analyze without further investigation.

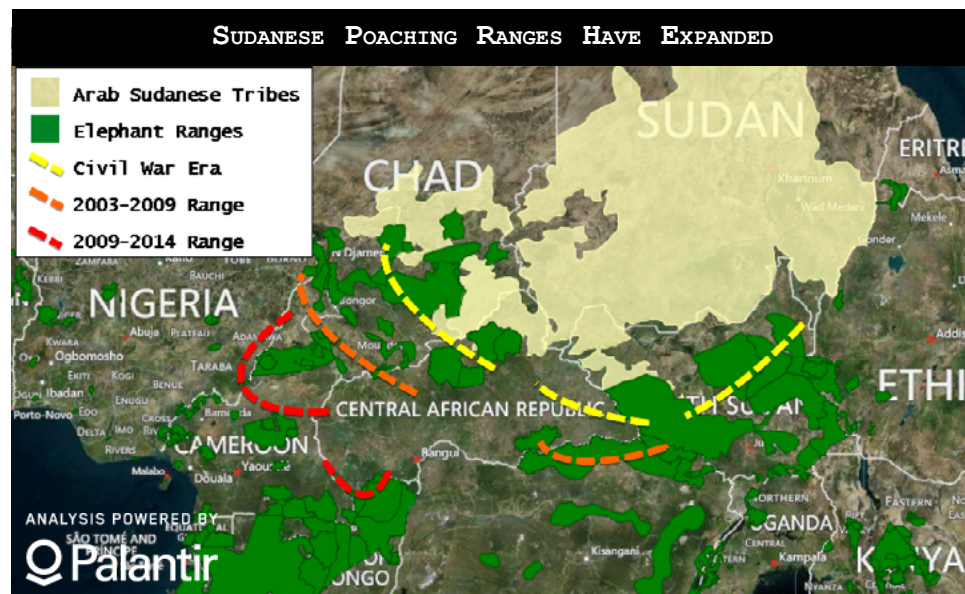
As recently as a few years ago, poaching columns of 100 to 200 men, each equipped with a standard issue AK-47 or equivalent, were regularly seen originating from North Sudan carrying satellite phones, animal medicine, and basic rations to sustain extended expeditions. Convoys today appear smaller, likely because today's payoff is lower, but they still can number up to 30 to 40 men—large by regional standards—that disperse into smaller groups of 3 to 4 each to cover ground and hunt for the entire dry season. These forces are extremely aggressive, even purposely maneuvering to attack wildlife and military forces. In Chad at Zakouma National Park in 2012, 5 rangers were ambushed at dawn and gunned down outside their tents by men linked to the Sudanese army. Separately, in 2010, Ugandan soldiers hunting Joseph Kony in the forests of the eastern CAR ran into a '400-strong' Sudanese ivory caravan. 10 Ugandan soldiers died in the subsequent firefight.⁷

Sudanese poaching formations are large and well organized because of the logistical demands of hunting for what can often be an entire dry season. The ranges these groups travel are vast, and traversing them is difficult. Moreover, poaching caravans are often under time pressure during the window of opportunity presented during the dry season, when elephants leave national parks to seek alternative watering holes, and when major crossing areas are still passable before seasonal flooding.⁸ The trek from the Sudanese border to central Chad alone takes about two weeks, a significant amount of time in hostile territory. Interrogations, as related by park officials, indicate that poachers have excellent local intelligence, and advance knowledge of their intended targets and their local terrain. Poachers often avoid all population centers on the inbound journey, subsisting solely off rations brought with them or hunted along the way. Sudanese poachers will frequently take portions of elephant carcass such as ears, tails, and trunks as trophies, but generally leave the bushmeat, which indicates self-reliance, but also local strategy; such generosity can earn them local allies and willing scouts. In other cases, however, where ivory is not easily available, poachers have been known to turn to looting, rape, and violence in order to defray the costs of an expedition. Sudanese poachers appear to sell their ivory hauls as groups, and not as individuals; this points to control over the group being exercised by an overall commander.

Accurately mapping Sudanese operating areas is complex given the scarcity of documented

and verifiable information, but some broad trends can be seen. Permissive areas generally share religious or ethnic identities, such as northeastern CAR or eastern Chad, whereas Sudanese poachers have never penetrated very deep in the DRC, reaching Garamba National Park in the north, but not any further south where other armed actors control territory and poaching. As elephant herds disappear, poachers are being pushed farther and farther afield, reaching northern Cameroon in 2012, southeastern CAR near the border of Republic of Congo in 2013, and possibly into Southern Cameroon. In addition, some environments that were traditionally easy prey have hardened their resistance. Zakouma National Park, after new management by African Parks, has not lost a single elephant, through a combination of integrated intelligence and rapid-reaction efforts and coordinated patrols with Chadian army brigades.

Sudanese elephant hunters have a long history of traveling afield, but their new range is unprecedented. Long before this century, Sudanese horsemen would cross into the Eastern CAR with their cattle to run down elephant herds. By the 1980s, Libya flooded the region with cheap small arms, while in the early 2000s the government in Khartoum began arming and organizing the Kordofani tribal pastoralists into the Muharaleen, the forerunners to today's Darfuri Janjaweed.⁹ In the Chinko-Mbari drainage area in the Eastern CAR, which is virtually devoid of human populations or infrastructure and was once teeming with wildlife, local conservationist Erik Marary, one of few continuously engaged in the region, recounts continuous poaching pressure since the 1980s. He estimates a death toll of at least 20,000 elephants in the past 20 years, which he stresses is highly conservative, attributing 90% of this poaching to the Sudanese, with "ammunition fabricated in Sudan."¹⁰

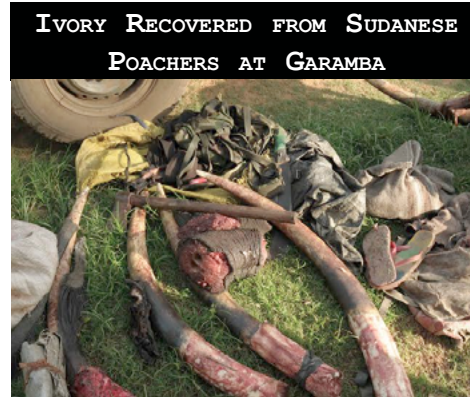


Operational ranges represent analyst estimates, and are not intended to be exact

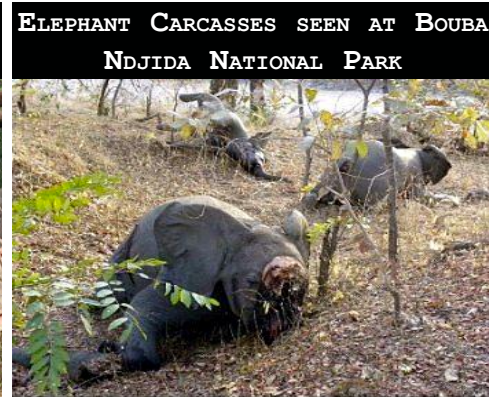
Since the closing years of the Sudanese civil war, there has been a significant expansion in the range of North Sudanese poachers. In Garamba National Park, commercial Sudanese poachers played a critical role in decimating the white rhino population during the 1980s, but the Murahaleen, Khartoum-armed arab militias, did not return until 2003,¹¹ soon after which pack animals transporting large amounts of ivory were seen in the area.¹² Similarly, in Zakouma National Park in Chad, 70% of the park's 3,900 elephants were wiped out between 2005 and 2009,¹³ with Sudanese again identified as the primary perpetrators. At the same time, the Sudanese have continued penetrating deep into the Eastern CAR for its remaining elephants. A single and relatively small survey in 2007 in Northeastern CAR encountered 180 elephant carcasses, and estimated 553 in their area alone, most of which they believed to be perpetrated by the Sudanese.¹⁴

Even far from their core operating areas, militarized Sudanese poachers have been willing

and capable of engaging in combat with local militaries. In early March 2012, a Cameroonian Rapid Intervention Battalion of 600 soldiers with a helicopter and two light aircraft were deployed into Bouba Ndjida in response to the poaching wave. At least one soldier was killed in an overnight firefight, while the poachers would go on to kill at least 20 more elephants in the next two weeks.¹⁵



Source: John Sidle



Source: International Fund for Animal Welfare

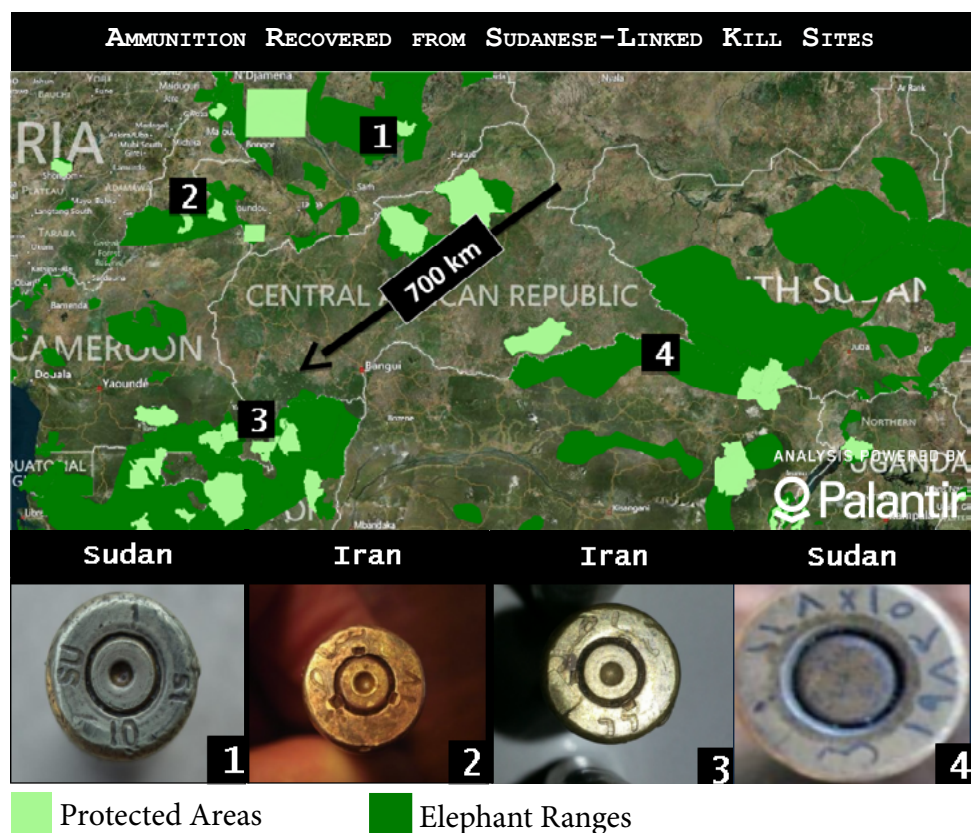
Sudan's Military & the Janjaweed

It is difficult to trace Sudanese poachers back to their exact sub-tribes. However, there is ample evidence that many hail from the Northern Arab tribal ecosystem that is closely allied with the government in Khartoum, and from which the Janjaweed were recruited. It is known that the North Sudanese army (Sudan Armed Forces, SAF) was complicit in big game hunting for both bushmeat and ivory during the civil war, and there is evidence that the involvement of at least some Northern soldiers has continued. The intersection between poaching and trafficking through Sudan is less clear, but it is likely that it is highly organized and linked to the government in Khartoum, or to its agents in the militaries. In the words of Esmond Martin, an expert on Sudan: “The trade of ivory in Sudan is so expensive because of the high cost of transport, which means that no individual buyer can afford to transport the tusks from the south to the north and still sell at a profit.” He also notes that “every trader we talked to said the Sudanese national army has been doing the killing.”¹⁶

The government in Khartoum has traditionally used the Arab tribes as auxiliaries, arming and mobilizing them in times of need. Control is exerted through the supply of money, weaponry, and permission to raid and loot, but in recent years financing from Khartoum has grown tight. As North Sudan struggles with international sanctions and decreased oil revenues in the wake of tension with South Sudan, these tribal militias have increasingly turned to criminal activities to make up for the shortfall. To retain control, Khartoum appears to have allowed them a freer reign in enterprises that range from control of gold mines to banditry to wildlife poaching raids far outside Sudan's borders. Leaders of many tribes and sub-tribes maintain vast criminal empires and are deeply complicit in human rights atrocities. Sheikh Musa Hilal, a leader of the Rizeigat Arabs, for example, is a prominent figure implicated in the Darfuri genocide and on international sanctions lists. His tribesmen may also have been those that killed the elephants at Bouba Ndjida in 2012.¹⁷

In an environment of extreme data scarcity, ammunition tracing in addition to other forensic analysis, has been an effective technique linking poaching to the Sudanese. An analysis by C4ADS of ammunition collected from sites visited by Maisha Consulting (a wildlife security NGO), African Parks, and others yields interesting insights. Ammunition collected from multiple elephant kill sites across Cameroon, Chad, the CAR, and the DRC is of the series and types that closely match those in Khartoum's armories. Sudanese ammunition admittedly circulates widely in black markets across the region, but at both Bouba Ndjida and Dzanga Sangha, the two famous massacres in 2012-2013, Iranian ammunition from an

Islamic Revolutionary Guard Corps (IRGC) factory in Tehran, was located. Iranian ammunition is still rare in the region. The primary user is Khartoum; similar rounds have been documented across Sudan, but almost exclusively in the hands of Northern military, paramilitary, and auxiliary forces.¹⁸ The discovery of Iranian ammunition at elephant kill sites is a strong indication that actors closely allied to Khartoum are doing much of the poaching.



Source: Maisha Consulting, African Parks, UN Panel of Experts

A range of other documentary and forensic evidence supports this hypothesis. In one notorious incident in Chad, which was covered by several news organizations, including CNN,¹⁹ at least 9 elephants were killed by a four-man poaching party in August 2012 around the Heban area near Zakouma National Park. Scouts raided the poaching camp on 12 August seizing most of their haul. In retaliation, the Sudanese poachers, who included at least one Sudanese army infantryman attached to the al-Qobba Unit, led an ambush on Zakouma's park rangers. Attacking at dawn on September 3rd, five rangers were murdered in their tents and another ranger went missing, since presumed dead. Every piece of evidence from the incident, some of which is included on page 29, points back to Sudan – from uniforms belonging to Khartoum's notorious Abu Tira paramilitary forces to ammunition manufactured in North Sudan to a military leave slip identifying one of the soldiers. To date, there has been no follow up by law enforcement in Sudan.

Chadian authorities, on the other hand, have been among the quickest to respond to elephant poaching. President Deby burnt Chad's ivory stockpiles in 2014 and has committed military resources to aid national park personnel. Chad's robust recognition of poaching as a serious security threat is likely motivated in part by the close links that poaching has with regional conflict. Sudanese poachers originate from the same tribes and areas that have bred nearly every modern Chadian revolt,²⁰ as well as the most serious threat to his regime, when forces associated with the Union of Forces for Democracy and Development blitzed N'Djamena in 2008, and were only barely repelled with French assistance. Stepping up enforcement in national parks therefore serves both a conservation and national security purpose.



Source: African Parks, CNN

The South Sudanese Armed Forces

Soldiers of the Sudan People's Liberation Army (SPLA), today the South Sudan National Army (SSNA) financed their rebellion in the early years in part through the poaching of rhino in neighboring Garamba National Park in the northeastern DRC. Over the ensuing decades, soldiers and militias out of South Sudan, including the former SPLA, have been among the worst perpetrators of ivory and rhino horn poaching, although the scale today is likely much smaller than during the apogee of violence in Sudan. The rhino is long extinct in the area, and elephants are severely diminished, but South Sudanese forces are still seen in poaching incidents inside South Sudan and across the borders in the DRC, and possibly southeastern CAR. Ivory poaching has declined, but commercial bushmeat hunting is still widespread within the South Sudanese army. In what is likely just the tip of a very large iceberg, an SPLA Captain was arrested near Malakal with 14 bags of bushmeat, approximately 212 poached animals, in April 2013.²¹

South Sudanese army forces have been sighted inside Garamba National Park in the DRC on several occasions. These forces appear to be comprised of both active and demobilized soldiers. Garamba Park rangers recovered SPLA army uniforms and equipment in October 2013, but several other groups are also active. One South Sudanese armed group operating inside Garamba in 2013 was led by an ex-SPLA soldier called "Tabani" who led a band of 10 to 25 men active in cross-border poaching, gold mine raiding, and looting.²² In 2012, two GPS-collared giraffes (of the 50-60 remaining in the area) were killed, with the trackers confirming the carcasses crossed the South Sudanese border.²³ In another incident, a group of 15-20 poachers were interrupted by Congolese and Guatemalan peacekeeping troops backed by rangers and security contractors; the poachers fled across the border but were later arrested and identified as members of the South Sudanese army.²⁴ In addition, South



Source: African Parks, UN Panel of Experts

Sudanese forces may also enter northern Uganda to poach. In 2012, a firefight between Sudanese poachers and Ugandan forces left a Ugandan soldier and wildlife ranger dead. The incident was blamed on Toposa tribesmen who often cross the border to graze their cattle and poach, but among recovered items were Kalashnikovs, bows and arrows, smoked buffalo meat, and, most tellingly, an SPLA uniform.²⁵

Elephants inside South Sudan are severely diminished from their historical numbers. There were as many as 130,000 elephants just 25 years ago,²⁶ but fewer than 5,000 remain today. Much of local wildlife was simply consumed by Southern armies and militias during the decades of civil war, but a small number of elephants have survived. A small population exists around Boma National Park in Jonglei State, but the majority are believed to be inside the sparsely populated and virtually intraversable swamplands of the Sudd or Bahr el Jebel that runs from



Source: F Grossman, WCS

central South Sudan to the Ugandan border. The Northern horsemen were unable to ride into the Sudd, but today these last elephant populations are still under severe threat. As early as 2012, Paul Elkan, a prominent conservationist in South Sudan was warning that South Sudan's last elephants could soon be dead within five years.²⁷ Today in 2014, insecurity and violence is significantly worse.

In mid-2013, fighting re-erupted around Boma National Park, when Murle rebels overran the area,²⁸ resulting in the destruction of local tourism facilities and the deaths of three wildlife rangers, two policemen, and the Boma National Park warden and senior Wildlife Ministry official, Brigadier Kolor Pino. The men were all executed, not by rebels but by SPLA soldiers, possibly due to Brig. Pino's Murle tribal ethnicity.²⁹ Meanwhile in the Sudd, renewed fighting in early 2014 has pushed communities into the wetlands. In Panyjar County along the Sudd, over half of houses were reported burnt down, and tens of thousands were reported displaced.³⁰ Many are now living on uninhabited islands inside the Sudd and are highly food insecure.³¹

Ultimately, however, it is unlikely the South Sudanese play a major role in continental ivory poaching except on an opportunistic basis, even if they are prolific bushmeat poachers.

South Sudan is simply too chaotic and too disconnected from international transportation centers for any commercial ivory trade to be profitable, while elephant densities in the region cannot justify large investments of poaching resources. Ivory routed to Juba from the northeastern DRC is just as likely to turn back south to Uganda and out to East Africa as to enter the North Sudanese trafficking channels.

The CAR Crisis, Seleka & the Anti-Balaka

Where Sudan was long the market and gateway for ivory, the Central African Republic has long been the source; a “reservoir of resources” from ivory to meat, diamonds, slaves, gold, and grazing land.³² In the 19th century between 3.3 and 3.4 million elephants were killed,³³ while a century later, in 1982 alone, 150 tons of ivory from an estimated 20,000 elephants were shipped out of Bangui in just the legal trade. Hunting in the CAR became so intense that of an estimated population of 80,000-100,000 elephants in 1976, numbers crashed to as low as 15,000 by the mid-1980s.³⁴ Today as few as 1,000 to 3,000 elephants are left in the CAR,³⁵ the vast majority concentrated in the Dzanga-Ndoki ecosystem in the southwestern corner near the border with the Republic of Congo. Roughly 200 elephants remain in the eastern Chinko region of the CAR.³⁶ These last pockets are under very real danger of extinction from the prevailing state of anarchy across much of the region, and from a variety of armed actors including, for a period, the Seleka and their Sudanese and Chadian allies, and today possibly the anti-balaka forces.

The central government in Bangui has never asserted control over CAR’s remote and under-populated hinterland, and there has always been raiding and strong competition for influence from neighboring countries, including Libya, Chad, and Sudan. As detailed earlier, in previous decades this allowed waves of Sudanese and Chadian poachers to decimate the country’s wildlife deep into the east and north of the country. More recently, the 2013 emergence of the Seleka, a loose collection of majority Muslim rebel factions emanating from the remote northeast, expanded the operating area for northern Sudanese poachers across the entire country. Seleka’s numbers quickly expanded to 20,000 by late 2013 as battlefield advances won them recruits, including Sudanese and Chadian poachers eager to share in the spoils.³⁷ Shortly after Seleka overthrew the government in March 2013, elephant poaching in Dzanga-Sangha was reported to be rising, with elephant meat “flooding” the local market at Bayanga, the main town by the reserve.³⁸ The local Bantu pygmy armed group in the region, the Front for the Liberation and Independence of the Sangha-Mbaere (FLISM) released a statement in April 2013 issuing a call to arms against “Sudanese and Chadian Islamist poachers” who they accused of killing their animals in large numbers.³⁹

The most famous incident involving the Seleka, however, occurred in May 2013. Eighteen Sudanese poachers armed with 18 Kalashnikov rifles entered Bayanga, and made their way to Dzanga Bai (the “Village of Elephants”) where mineral salt licks lead to large elephant congregations. The Sudanese poachers at Dzanga Bai appear to have come from the north and were hosted by the ruling Seleka colonel in Bayanga at the time. The next

CAMERA TRAP, EASTERN CAR



Source: Released to CAADS by the Chinko Project



Source: Maisha Consulting/C4ADS

in 2012.⁴⁰ Colonel Bahit, the replacement Seleka commander, helped prevent follow-on attacks; later in the year, Bahit's forces stopped another Sudanese gang and arrested their scouts, although the poachers themselves backtracked and escaped.⁴¹

More recently, however, the changing situation in the CAR has shifted the threat to Dzanga's elephants. As part of an ongoing Muslim exodus out of the CAR, Seleka forces, including those of Colonel Bahit, have retreated back to their original strongholds. On March 10th, 2014, anti-balaka forces, majority Christian militias who are among the worst perpetrators of violence in the CAR today, entered Bayanga for the first time to loot and burn down Muslim houses.⁴² Anti-balaka forces are still present in the Bayanga area as of March 27th,⁴³ reportedly recruiting, with no international troops or visibility on local conditions. Elephants are among the most valuable commodity in the area, and given the collapse of carefully cultivated protocols with the Seleka, there is a high likelihood of more killing.

In addition to the poaching by armed forces, there is a growing threat to regional wildlife from the huge numbers of displaced people being pushed into forests in proximity to elephant ranges. There are over 600,000 internally displaced persons scattered across the CAR and over 300,000 refugees in neighboring countries as of March 2014, primarily in northern Cameroon and the northern Republic of Congo.⁴⁴ Humanitarian funding is at a fraction of required levels, and most populations are highly food insecure.

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DRC: Crime-Conflict Nexus & Wildlife Wars

Ivory is part of the conflict and criminal financing system in DRC. Any armed group operating in the vicinity of elephant ranges has strong incentives to engage in ivory poaching.

Ivory is one of many extractable commodities in the northern and eastern Democratic Republic of the Congo (DRC) that are closely intertwined with conflict and resource exploitation. Fifty years ago, more than 100,000 elephants roamed the DRC, but today fewer than 5,000 inhabit the equatorial forests and savannahs of the country.¹ Ivory is a traditional measure of wealth among local communities, but waves of conflict have decimated herds of elephants to a degree far beyond the demands of traditional use. It is estimated that up to 23 tons of ivory have exited just a single national park, the Okapi Faunal Reserve, over the past decade.² Much like gold, coltan, or any other conflict resource in the area, ivory's profits have funded and enabled military and militant operations. Ivory is portable, ideal for insurgents on the run in the bush, and it has a market value that ensures its attraction to high-level military and political criminal networks. The dynamics of sourcing ivory have led to deeply destabilizing alliances - in some cases, generals arming the very militants they are supposed to be fighting - in exchange for the provision of ivory.

**DOMINANT MODEL :
THE MILITARIZED DISTRIBUTOR**

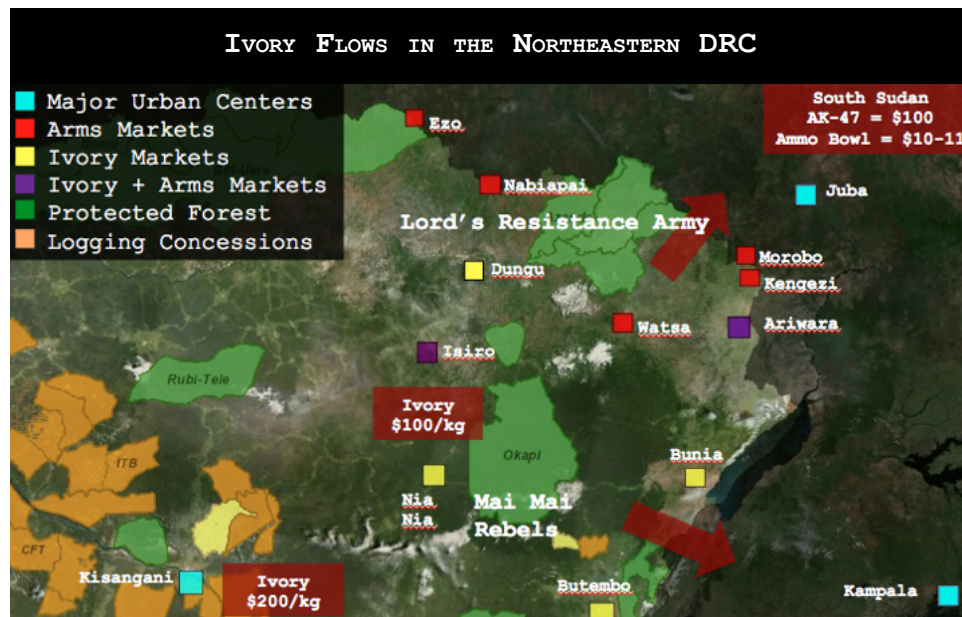


ANALYSIS POWERED BY
Palantir

The impunity for criminal and conflict actors, institutionalized ivory poaching, and trafficking networks, and wide availability of armed militias has engendered a highly militarized distributor model in the DRC. The role of the patron appears dominated by the military with poaching outsourced to bush militants and heavily armed criminal gangs.

There are six major protected areas with elephants in the DRC – Garamba National Park, Maïko National Park, Okapi Faunal Reserve, Salonga National Park, Lomami National Park, and Virunga National Park – nearly all of which have been areas prone to persistent low-intensity armed violence. Any criminal enterprise operating in the vicinity of an elephant range has a strong incentive to profit from this very lucrative trade, and armed groups are best organized and equipped to dominate local poaching. Ivory also has the beneficial quality of being fungible: it can be sold for profit at virtually any local market, but it can also be used by armed groups to barter for ammunition, equipment, or patronage.

Actual poaching of elephants is difficult to separate from conflict and broader trends of resource extraction. Natural resource exploitation is a major source of local employment and is bringing large numbers of people into resource-rich areas in the forests. However, few of the profits benefit local communities. Large criminal enterprises fueled by corruption and violence dominate extraction; these groups have little incentive to invest in forest communities, as they benefit from insecurity and the absence of the rule of law. Many have diversified into other illicit industries, holding funding portfolios that include poaching, logging, mining, smuggling, extortion, and outright looting. Thus in the DRC it is not useful to conceive of “poaching kingpins” as such, but rather as significant organized crime figures who support poaching as one of several profitable activities. Resource extraction is prominent among these activities, and buffer regions outside national parks are rife with il-



Source: Adapted by C4ADS from Author Interviews, Terese Hart and Small Arms Survey

legal extraction activities.³ Large-scale licit activities too are expanding rapidly, and recently granted oil exploration concessions in Virunga National Park cover 85% of its land area.⁴

Both licit and illicit resource extraction threaten elephants. Expanding transportation infrastructure, including informal roads and trails and the proliferation of cheap motorcycles, has cut deep into elephant habitats. These emerging dynamics have increased accessibility to elephant populations, following tremendous damage already done from decades of violence. Two consecutive civil wars have seen forests stripped to fund military activities, and in their wake, waves of armed groups and refugees have combed over what was left. Maïko National Park is very remote, and barely connected to transport networks, yet it was a major poaching hotspot during the civil wars throughout the 1990s, and is increasingly seeing gold mining operations along its buffer.⁵

Low-Intensity Wildlife Wars

Most elephants in the DRC are located in the northern and the eastern parts of the country, where insecurity and violence have historically been highest. The remote terrain coupled with the anarchic environment makes any comprehensive accounting of poaching impossible. Large swathes of land are protected as national parks or reserves, but these designations often exist only on paper. On the ground, rangers control small pockets of territory, defending it against a myriad of encroaching forces that include well-armed militias, organized poachers, undisciplined national armies, and illicit or artisanal miners. Even today, when security is significantly better than in the past, park rangers in Garamba National Park control only the southern third of the park, and certainly no more than 50% of the total area.⁶ The Lord's Resistance Army (LRA) controls much of the rest, with a free hand to poach. Virunga National Park along the border with Rwanda is similarly carved up amongst a number of armed groups that until recently included the M23 rebels, the FDLR (Forces Democratiques de Liberation de Rwanda, a remnant of Hutu militias from the Rwandan genocide), and segments of the ADF-NALU (Allied Democratic Forces-National Army for



Source: Adapted by C4ADS from ACLED 2014 data

the Liberation of Uganda, an insurgent group left over from the Idi Amin era, possibly linked to al-Shabaab in Somalia). In 2013 there was renewed insecurity across 90% of Kahuzi-Bienga National Park, which had only recently come back under the control of park staff after many years.⁷

The scale of damage done from decades of violence is difficult to overstate. By the end of 1999, all five of UNESCO World Heritage parks in the DRC were included on its list of World Heritage Sites in Danger. None has been delisted more than a decade later, and recent accounting shows devastating damage. In Garamba, the last aerial survey in 2012 estimated 1,600 elephants - 50% of a 2007 survey and 15% of the 11,000 elephants estimated in 1995.⁸ The situation is the same across other national parks, but poaching levels are very high even in some of the DRC's most remote forests. The Gangu forest, within the 60,000 km² Bili-Uere Reserve, lies north of the Uele River near the border with Central African Republic (CAR), and is extremely remote. It is far from areas of violence, has very low population density, and is unconnected to major transportation arteries or markets, including the commercial bushmeat trade. However, even here, elephant encounter rates fell by more than half between surveys in 2005 and 2013.⁹

Ranger forces, outgunned, outnumbered, and stretched to their limit, have effectively been forced to become soldiers due to limited, absent, or complicit state authorities. One hundred ninety rangers have been killed in the line of duty in the DRC in the last 15 years, a sizable proportion of the global total,¹⁰ and current levels of manpower and resources make achieving mandates impossible by any reasonable standard. Most parks straddle some of the world's largest, most rugged, and least accessible terrain, and rangers must cope with vastly inadequate numbers and equipment. Okapi, for example, in 2011 had 110 rangers¹¹ to cover roughly 1/5th of the Ituri forest, or about 13,720km², amounting to a force-to-space ratio of 0.008.

Even in fulfilling their core mandate of securing the parks against civilian poachers, rangers are confronted with tremendous obstacles. Rangers are poorly supplied and poorly taken care of; they receive \$125 per month, more than the average Congolese wage, but measured against a sizable risk of injury and death to a family's primary breadwinner. Most rangers will see combat. In Virunga, in early 2006, 64 of the 71 animals recorded killed were poached by the Congolese army, while in May 2008, of the 14 elephants recorded killed in a two-week period, 4 were killed by the FDLR rebels, 5 by the Congolese army, 3 by the local Mai Mai (local self defense militias common throughout the eastern DRC), and 2 by local poachers.¹²

Armed actors regroup in national parks and forests and frontlines often shift rapidly, forcing rangers into combat operations. In two days in August 2012, Virunga rangers repelled two separate attacks on their outposts from two separate rebel groups. FDLR rebels attacked a patrol post at Lulimbi that led to an hour-long gunfight that left



Source: Garamba National Park



Source: UNOCHA-Bunia

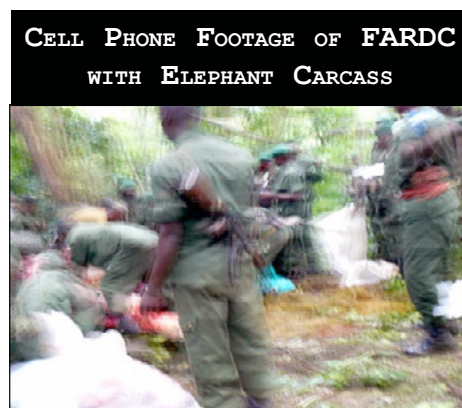
two rangers injured, while a Mai Mai militia attacked a post at Muramba before dawn but could not overrun the prepared defensive trenches.¹³ In addition to the FDLR, (who killed 11 rangers between January 2011 and August 2012), and the Mai Mai, the ADF-NALU also abducted 2 Virunga rangers in 2005, who have not been seen since.¹⁴ Virunga is an extreme example, located in the particularly violent eastern region near Rwanda, but even in parks further from the active warzones a variety of smaller armed actors flourish. Many prey on local communities and are able to easily intimidate conservationist efforts. In the Lomami National Park, the militia of Mai Mai Thoms forced conservationists out of the park in less than a month in 2013 and attacked agents of Congo's premier parks and conservation organization, the Institute Congolaise por la Conservation de la Nature (ICC), three times in order to gain poaching access.¹⁵

Basic attempts to patrol or enforce the writ of park authorities can be met with extreme retaliatory violence. In Garamba, the LRA arrived in October 2005 and occupied the northern sector, but once Ugandan operations, in cooperation with US Special Operations Forces, began to force them out in 2008, they retaliated, attacking Nagero park headquarters on January 2, 2009. This brutal attack killed 10 park employees and destroyed most of the rangers' equipment; in addition, the militants finished by abducting 3 local children before the Congolese army arrived.¹⁶ In the Okapi Reserve, the local Mai Mai rebels have actively maneuvered to force out conservation groups with intimidation tactics and outright assaults. On June 24, 2012, a mixed force of Mai Mai rebels from the Morgan and Simba groups attacked a ranger post at dawn with small arms and two .50 caliber machine guns. They quickly overran the headquarters at Epulu, killing and burning rangers alive, looting and raping, and then press-ganged 56 civilians to carry the loot from their conquest back to their base. Despite eventually releasing many of those captured in the incident, they are still holding at least 11 young girls in slavery.¹⁷ Before departing they also left an unequivocal message to the conservation community – they slaughtered all 14 penned and highly endangered okapi, whose numbers had been carefully nurtured over the years.

The FARDC

Many regional and international observers consider the Congolese Army, (known by its French acronym FARDC—Forces Armées de la République démocratique du Congo), to be the region's worst poacher. Even the usually conservative estimates from CITES attributed 75 percent of poaching in nine out of eleven DRC conservation sites to the FARDC.¹⁸ This is not surprising given the undisciplined, poorly trained, and rarely paid nature of the force. The force's disorganization has been exacerbated by the decision in the mid-2000's to integrate former rebel

militias into its ranks. The FARDC is often deployed into areas with high elephant populations, and often without rations, increasing poaching risk by their mere presence. An increased FARDC presence in a region has often coincided with human rights abuses and the less-recorded devastation of local wildlife and natural resources. FARDC soldiers have also been implicated in virtually all local extractive industries, including the illicit charcoal trade,¹⁹ mining, logging, and poaching, with vast criminal networks believed to be pervasive across the force.



Soldiers Slaughtering an Elephant for Bushmeat

Source: Terese Hart, Flickr

Poaching involving the FARDC most closely follows a distributor model, with patrons dis-

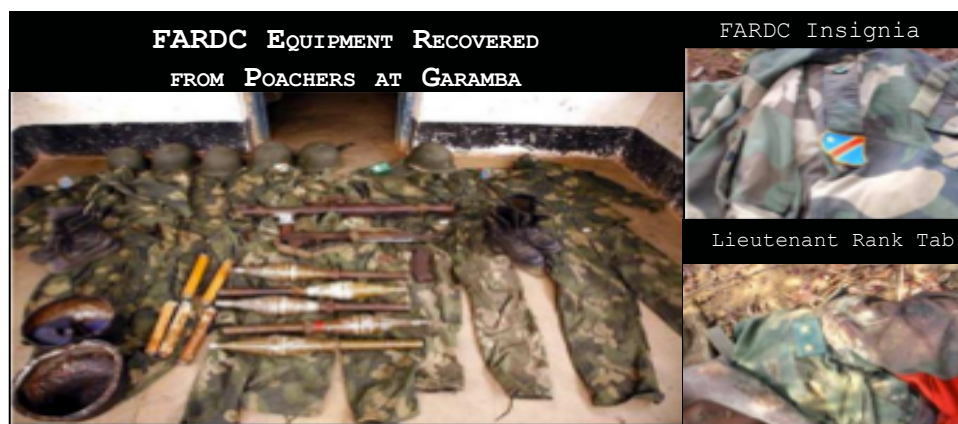
FARDC MILITARY DEPLOYMENTS AROUND NATIONAL PARKS

Reserve	FARDC Region	Commander	Local Areas
Garamba	9th Military Region (HQ Kisangani)	Brig. Gen. Jean-Claude Kifwa	Faradje Dungu
Okapi	9th Military Region (HQ Kisangani)	Brig. Gen. Jean-Claude Kifwa	Bunia Kagaba Bafwasende
Maïko	9th Military Region (HQ Kisangani)	Brig. Gen. Jean-Claude Kifwa	Lubutu Walikale
Salonga	3rd Military Region (HQ Mbakanda)	Brig. Gen. Philemon Yav	Boleko Monkoto Watsikengo
Virunga	8th Military Region (HQ Goma)	Maj Gen. Bahuma Ambamba	Rwindi Beni Butembo

Source: IISS, GlobalSecurity, UNESCO World Heritage List, News Sources

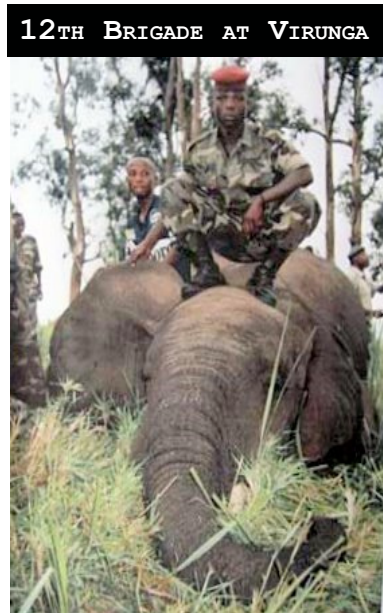
tributing weapons and ammunition to poachers in exchange for ivory or as a means of making up arrears in payment. Sometimes these arrangements parallel military chains of command; often, as discussed below, they directly undermine those structures. The FARDC is involved in poaching at both the individual and the institutional level. Individually, soldiers are often the primary source of small arms used to shoot elephants for food or ivory, but the military also dominates larger criminal poaching and trafficking networks. An investigation by ICCN estimated very large volumes of ivory moving out of the DRC's forests – 17 tons out of just Okapi in the last six months of 2004 – but also found that there were as few as 12 individuals who dominated the trade, all of whom were linked to the military or police.²⁰ Anecdotal information suggests links between the FARDC and poaching; even in very remote areas with small numbers of soldiers such as in Bili-Uere Reserve, the FARDC base at Bili was most likely the culprit for the severe decline in the local elephant population.²¹ Ivory consolidation and trafficking hubs also overlap with several FARDC positions. The city of Kisangani, the headquarters for the 9th Military Region, is most likely the command hub for most of the ivory exiting the Orientale region, but smaller garrisoned towns such as Bunia or Dungu are also trafficking way stations for cross-border movements.

Soldiers often poach out of necessity, and it is unlikely that the average Congolese army soldier makes anything more than pocket change from the trade. In fact, a sizable portion of military poaching at the hunting level is likely incentivized by the need for bushmeat; an



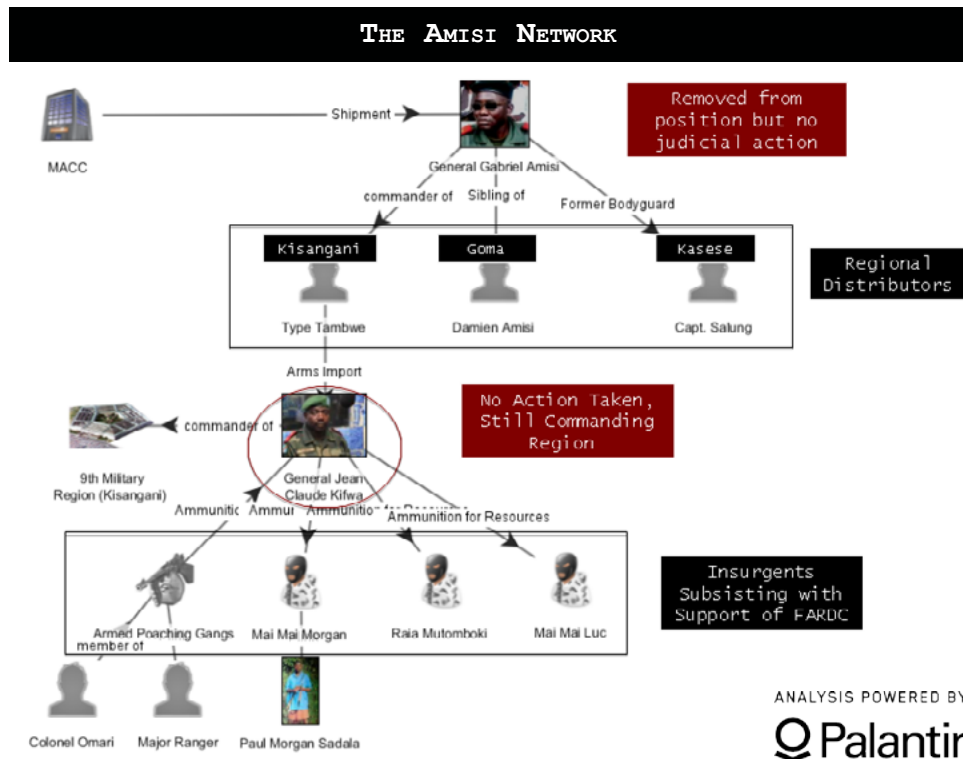
Source: African Parks, UN Panel of Experts

elephant can feed an entire small-unit formation. In 2010, the commander of the FARDC 15th Brigade deployed around Virunga admitted as much, pointing out that his troops would starve without recourse to poaching.²² An often-successful work-around has been for parks to provide rations to military contingents in exchange for assistance patrolling under the supervision of conservationists. In Virunga, this led to such a good working relationship that ICCN awarded then-Colonel Philemon Yav, commander of the 81st Integrated Brigade, a conservation award for his help.²³ Such engagement is important, but it is not entirely free of cost, whether in monetary or reputational terms – Yav helped arm the PARECO rebels.²⁴



Source: Terese Hart, Flickr

Of much more consequence than low-level poachers are the high-level military criminal networks that operate with impunity, looting resources and committing grave crimes against civilians. In late 2012, the UN Panel of Experts in the DRC disclosed a report on the “Amisi Network”, a large-scale military poaching and arms trafficking syndicate whose ultimate beneficiary was no less than General Gabriel Amisi, the Chief of Staff of the FARDC. A pyramidal structure with General Amisi at the top brought hunting ammunition into the country from the French-owned and ROC-based MACC cartridge factory, distributed it down the command chain, and then handed it out to violent insurgent groups in exchange for ivory and gold (in correspondence with the UN, MACC denied any illicit use of their ammunition). These insurgents included one of the Ituri’s most violent militias, the Mai Mai Morgan, (described in detail below). President Joseph Kabila fired General Amisi after the allegations, but he remains free, and still profits from the Omate



Source: UN Panel of Experts

MANUFACTURE D'ARMES ET CARTOUCHES CONGOLAISE (MACC)

Established in 1963 in the Republic of Congo, based out of Pointe Noire, and likely run by the Laumond family, MACC is one of the most prolific suppliers of hunting ammunition across Central Africa. In 1987, the company recorded 27% in local sales and 73% in export sales while an investigation in the early 2000s by Karl Amman (Dale Peterson, *Eating Apes*) found a small factory that nonetheless shipped 10 million cartridges across a wide range from Gabon to Cameroon, the CAR and the DRC as far south as the border with Zambia. In 2012, MACC was identified as the supplier of ammunition to the "Amisi Network," an ivory poaching network in the DRC run by the Vice Commander of the Congolese Army. MACC ammunition was also found in the hands of militants to whom hunting was outsourced.

MACC insists it only produces 12-gauge ammunition for small game hunting, although its marketing clearly appears geared towards elephant hunting. More professional hunters generally prefer larger caliber .375 or .458 ammunition but in Central Africa, 12-gauge shotguns are also used for elephant hunting, with bullets often melted together and repackaged into the cartridge (Stiles, IUCN). Conservationists repeatedly cite MACC ammunition as a means for wildlife poaching.

Registration Information: M. Michel Laumond (Owner)

Entreprise	Federation	Activite	Responsable	Email	Ville	
M.A.C.C.	INDUSTRIE	Fabrication Cartouches	M. Michel LAUMOND	macc@macc.cg /macc@cg.celtelplus.com	Pointe-Noire	294.06.46/5

Source: Republic of Congo Business Registry



Source: UN Panel of Experts

Source: CITES

Source: Terese Hart, Flickr

gold mine, one of North Kivu's richest.²⁵ Others are similarly unscathed: General Jean Claude Kifwa, cousin of President Kabila and commander of the 9th Military Region-Kisangani, still retains his position despite having overseen the epicenter of the ivory trade. Morgan too is still at large despite having been arrested thrice, released after intervention by "FARDC officials in Kisangani."²⁶

The Mai Mai Militias: Morgan, Thomas & Simba

Across Orientale and Nord Kivu provinces, official peace since 2007 has not prevented a collection of scattered local militias from preying on local populations and exploiting resources. Mai Mai militias often serve in the distributor model as low-level poaching groups tied to an overall patron, to whom they supply ivory in exchange for materiel and freedom to operate. Mai Mai will also, at times, act more autonomously to poach elephants as opportunities present themselves. In Orientale and Nord Kivu, once among the least populated regions of DRC, recent human encroachment has been substantial, and satellite analysis over the past 20 years has shown that the regions adjacent



to the Okapi Reserve have undergone some of the most substantial deforestation in the entire country.²⁷ Ituri forests were frontlines during the civil war and rebel groups twice occupied the Okapi Faunal Reserve, in 1996 and 2002, while Mai Mai Simba rebels have lived inside southwestern Maïko National Park since the assassination of Patrice Lumumba in 1964.²⁸ In the years since, the region has grown into a major hub of regional natural resource exploitation, much of it controlled or co-opted by armed groups including local Mai Mai militias. Proximity to major transport infrastructure leading out of DRC likely means that ivory poaching in the Ituri and Kivu regions is more closely connected to Ugandan commercial ivory networks than those in Garamba, which seem to mainly service Sudanese trafficking channels.

Individual Mai Mai militias, particularly the Mai Mai Morgan, have distinguished themselves through extreme acts of violence against civilians. “Morgan”, whose real name is Paul Sadala, hails from the Bombo community in Ituri²⁹ and goes by the nicknames of “Ekasambaza” (“Keep the loot”) and “Chuck Norris.” Morgan has been poaching elephants in Ituri since 2005, but after 2007, when major fighting in Ituri began to die down, he has reconstituted himself as the leader of a prominent militia in the region connected to FARDC officials in Kisangani, Simba militants in Maïko, and regional gold and ivory traders. Morgan’s militia has been accused of poaching over 2,000 elephants, and it gained prominence when it merged with the Simba, forming the Mai Mai ‘Lumumba’ in a nod to Simba’s roots. However, this tenuous alliance has since soured and Mai Mai Morgan is today likely to number in the tens, and even at its peak likely never numbered over 100 people. Until recently it was organized into three groups: – one under Morgan’s personal command, and others under lieutenants Manu Mboko and “Jesus.” Jesus was killed in December 2013, when he shot himself in a failed attempt to demonstrate his magic.³⁰ As elephant herds have thinned, Morgan appears to have shifted his organization’s focus to local gold mines.

Morgan’s network has close links with senior FARDC officials and appears to have been an important provider for the “Amisi Network.” General Jean Claude Kifwa, commander of the 9th Military Region based out of Kisangani, supplied Morgan’s militias with arms and munitions from the MACC munitions factory in exchange for ivory. General Kifwa is reported to have deputed two of his men, Colonel Jean-Pierre Mulindilwa and Colonel Kakule Kayenga, to manage relationships with Morgan, which included supplying arms, ammunition, uniforms, and communications equipment as per evidence gathered by the UN Panel of Experts.³¹ This has been supported by arrest testimony of one of Morgan’s captured ex-fighters.³² Morgan’s militias may also have supplied other middlemen such as Muhindo Kasabere, a Congolese businessman identified by the UN Panel of Experts as a major financier of militias allied to Morgan.³³ There is no available evidence linking the Mai Mai Simba to elephant kills, but their control over Maïko and incorporation into Morgan’s network make such activity likely.

Despite three arrests, Morgan remains at large as of March 2014, suggesting deep collusion with FARDC authorities. During the Epulu attack in 2012, soldiers from the FARDC 908th Battalion showed up late, just after the militia had withdrawn, and even then only pursued them for 4 km before returning to loot the rest of the structure.³⁴ In January 2013, the police and military raided Morgan’s house in the Kabondo suburb of Kisangani and arrested several people, all of whom were soon released on the orders of FARDC officials from Kisangani.³⁵ An April 2013 visit to Bunia prison where Morgan’s supposed comrades had been imprisoned found only his victims behind bars; those unfortunate individuals press-ganged by his militia into forced labor or sexual slavery and then captured by government troops.³⁶ Despite this extreme impunity, Morgan’s militia is undoubtedly weakened from its peak. Notably, his alliance with the Simba broke down in acrimony; from having mounted joint attacks in 2012, by 2013, Simba militants were offering to hand over Morgan for payment.³⁷

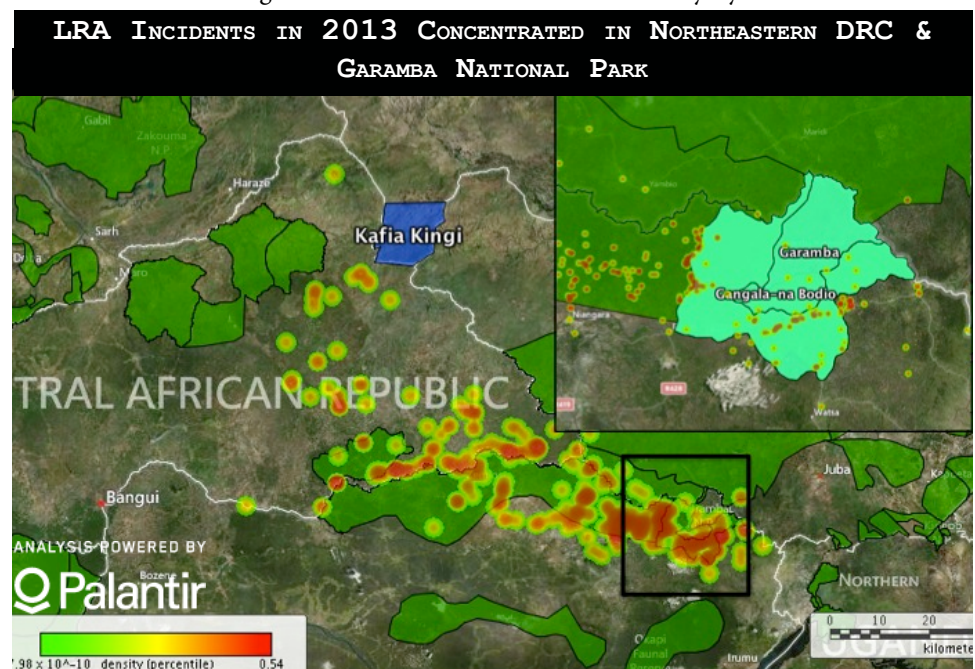
As elephants grow ever scarcer, Morgan may have shifted his attention to looting gold mines, but there are several other groups much like his. Southwest of Okapi, in the brand new Lomami National Park, a small population of elephants still exists in very remote for-

ests. There are few minerals in the region, and bushmeat and ivory are the primary resources available. In this area, the primary threat comes from a smaller but still very violent militia run by Thomas Mesandu, self-appointed “Colonel President” Thomas (alternately “Thoms”), a known major elephant poacher in the region. Mesandu is likely the same Thomas who escaped from prison after being having been arrested in 2007 for having led an attack that resulted in the mass rape of 114-135 women.³⁸ Thomas’ militias have mimicking Morgan’s brutality to intimidate conservation efforts. They beat one park worker to death in June 2013,³⁹ but Thomas has also tried a more nuanced approach. He is reaching out to local populations to leverage local discontent, in order to create legitimacy and operating space for his force.

The Lord’s Resistance Army

As a commodity, ivory is ideally suited to a small-scale insurgency pushed to the margins of state territory, such as the Lord’s Resistance Army (LRA), a rebel militia that began as a resistance movement to the Ugandan army but has since migrated into the DRC and the CAR, becoming very isolated in the process. The LRA has little access to markets and has no ability to build the infrastructure necessary for more complex natural resource exploitation. It has no legitimacy among the local population, is being pursued by Ugandan troops and US Special Operations advisors, and cannot readily enter into industries that require a stable, long-term presence. Ivory, however, presents a unique opportunity for the LRA since it is available and portable. Although the Sudanese likely do not direct LRA poaching operations, the two actors appear to be engaged in a classic distributor relationship, as ivory is bartered by the LRA for arms and ammunition with its patrons in the North Sudanese military. Sudanese soldiers are present near the LRA stronghold in Kafia Kingi, and as such LRA ivory likely flows into the same trafficking channels as that harvested by the Sudanese Arab tribes. Ivory then most likely either flows north to Khartoum and Port Sudan, or south to Eritrean or more likely Kenyan ports.

In mid-2011, according to defector testimony, Joseph Kony issued orders to hunt elephants and transport the ivory back to Kafia Kingi. This was reinforced in December 2013 by more testimony collected by Resolve and the Enough Project; according to one defector, “we had our orders: kill the elephants, and give the tusks to our commanders to give to Kony. Those orders are still standing.”⁴⁰ These dates coincide with testimony by Garamba Park man-



Source: Adapted by C4ADS from data provided by Invisible Children/Resolve

ager Luis Arranz in 2012 who noted that elephant poaching in the area was a new trend⁴¹ despite the LRA having entered the park as early as 2005. The LRA has been particularly active around and inside the Garamba ecosystem, including Garamba National Park and the surrounding hunting reserves of Azande, Gangala na Bodio, and Mondo Misa, which are home to one of northern DRC's last sizable elephant populations. The LRA has occupied the northern sectors of Garamba for years defending its stronghold against well-trained and equipped forces, even killing 8 Guatemalan Special Forces soldiers sent in by the UN on targeted anti-LRA operations in 2006.⁴² Park rangers, by contrast, as of 2011 struggled to maintain a force of 160 rangers armed with badly-deteriorating AK-47s which needed screws to stay together.

Kony's 2011 order and uptick in poaching coincides with a period in which the capability of the LRA as a fighting force was diminishing. LRA-related abductions and violence have also declined very significantly, down 64% and 94%, respectively, between 2011-2013 as compared to 2008-2010.⁴³ An account by Invisible Children/Resolve of LRA activities in 2013 recorded very serious losses, including the killing, defection, or capture of as much as 1/5th of the LRA's core Ugandan cadre and the deaths of several high-value leaders, including senior loyalist Binani Okumu. Okumu was the commander of LRA forces in DRC, and was believed to have been the point man for the LRA's ivory poaching operations in Garamba.⁴⁴ Today, the LRA is regarded as a severely weakened force that relies heavily on looting and ivory for its few funding opportunities.

Despite weakening, the LRA still maintains a firm foothold in Garamba. Park authorities are struggling to contain the poaching threat, and are barely able to maintain a presence on the fringes of the park around their headquarters at Nagero, certainly a far cry from the network of interior patrol posts and airstrips to the Sudanese border that would be needed to truly secure the reserve's elephant populations. Even as late as 2013, only a single permanent patrol post – PK15, 15km from the Nagero park HQ – existed in the interior of the park,⁴⁵ with rangers only able to maintain a persistent presence in the southern third of the park, between the Dungen and Garamba rivers.⁴⁶ Even survey flights have not extended to the Sudanese border,⁴⁷ although in 2011, two mixed patrols reached the South Sudanese border for the first time since 1997.⁴⁸

At least 65 elephant carcasses were recorded between January 2012 and October 2013, but only in the southern third of the park, where there is monitoring by rangers. Garamba Park authorities have recorded several firefights with LRA contingents, including the dismantling of a 100-man camp inside the southern sector.⁴⁹ In at least one incident in June 2012, rangers engaging in a firefight with the LRA overheard Acholi, a language of Northern Uganda, and upon returning the next day the rangers found elephant carcasses with the tusks missing.⁵⁰ Ugandan forces discovered at least one LRA ivory cache in February 2013,⁵¹ and in late 2012, Okumu was said to have travelled from Garamba to Kafia Kingi with as many as 38 tusks.⁵²

The LRA has also expanded its operational range. It first entered the CAR in 2008, at the time maintaining a logistical supply line to Kafia Kingi, but more recently has moved deeper into the eastern CAR where Seleka presence was weak or nonexistent. The LRA is believed to have reestablished contact with its former allies in the North Sudanese military, and established a base camp near the Sudanese army's Dafak military garrison in South Darfur state. Local conservationists from the eastern CAR point to specific instances where the LRA is known to have participated in elephant poaching or gold mine raiding,⁵³ while an informal bartering trade between the garrison and LRA camps, including wild game from the LRA for food, medicine, and ammunition from the Sudanese, has been reported.⁵⁴ With sanctuary reliant on Sudanese consent, and with the North Sudanese military already implicated in the trade, Kony's move to enter into providing ivory is likely to have been a simple choice. Local conservationists in the eastern CAR now point to concrete instances in the region where the LRA was involved in elephant poaching or gold mine raiding incidents; Given the LRA's links to the Sudanese military, it is likely ivory is handed off directly.

Foreign Armies: The Uganda People's Defense Force

The Uganda People's Defence Force (UPDF) left eastern DRC in 2011. Since then, there has only been one case where there was any evidence linking it to ivory poaching – the killing of 22 elephants at Garamba in March 2012. The elephants were shot on March 15th when one of the GPS-collared elephants stopped moving,⁵⁵ but all of the carcasses were not discovered until May 18th. At least 15 of the elephants were shot through the top of their skulls suggesting a trajectory from above the treeless and hillless terrain. Forensic evidence confirmed AK-47 assault rifles were used in the attack, and while multiple human tracks were found around the kill site, none were found leading away, suggesting an aerial extraction. On April 6th, during an aerial survey of the park in a Cessna 206, park staff observed a Ugandan military helicopter flying at about 500 feet above ground. As the Cessna approached, the helicopter turned abruptly northwest towards South Sudan. The same military helicopter was seen again four days later on April 10th just northeast of Nagero and can be identified from pictures as a Mi-8MTV5 (Mi-17MD) troop transport with tail registration AF-605. The aircraft was attached to anti-LRA operations based out of Nzara airbase in South Sudan. Ugandan authorities confirmed the aircraft was theirs but denied any involvement in ivory poaching.

While it is unlikely that the UPDF is a large scale institutional poacher in the DRC today, it played an important role in resource extraction during its long occupation of the eastern part of the country, and was involved in looting its natural wealth. Many of the old routes by which illicit resources were smuggled through the Upper West Nile still exist today⁵⁶ and the Ugandan capital of Kampala is well positioned as the primary regional trade and transportation hub. A large portion of trafficked Central African ivory is believed to pass through Uganda, much of it crossing from border towns like Ariwara in Orientale into trade hubs like Arua on the Ugandan side. It then travels down to Kampala to be containerized, and is then trafficked across the border into Kenya and on to ports such as Mombasa. Senior Ugandan business, military, and political officials have controlled these routes for years, and are alleged to earn a cut of the proceeds derived from illicit trade traveling along their respective routes. A Congolese businessman named in the UN report as part of the Amisi network was connected to a former UPDF Lt. Col. Dura Mawa Muhindo, now a local district council chairman who helped transport and protect ivory from the border to Kampala.⁵⁷



SAME HELICOPTER SEEN AT UGANDAN AIR BASE



ELEPHANT SKULLS SHOT FROM ABOVE AT GARAMBA PARK



Source: Garamba National Parks

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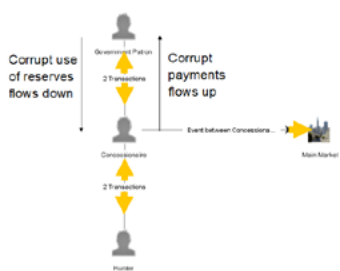
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Zimbabwe: Shadow Trade & Sanctions Evasion

Organized hunting and poaching is a means for ZANU-PF elites to earn scarce foreign currency and circumvent Western sanctions, while deepening business ties with East Asian businessmen and resource exploiters.

Zimbabwe's elephants are beginning to come under threat, although poaching levels appear currently low. There have been some alarming incidents in 2013, notably at Hwange National Park in mid-2013, where about 100 elephants were poisoned when industrial-grade cyanide was dumped into watering holes, and along elephant trails. Similar but smaller incidents have been reported across the country at Gonarezhou, Mana Pools, Zambezi, Charara, and Matsudona national parks.¹ Official government accounts admit to the poaching of at least 1,000 elephants between 2008 and 2012,² which could mask already heavy poaching in Zimbabwe's hinterlands. The truth is difficult to know with certainty; most census reports on Zimbabwean elephant populations are over a decade old.³ Meanwhile, conditions in Zimbabwe – poverty, land redistributions, corruption, and opaque elite ties to Chinese natural resource exploiters – are such that if organized poaching were to worsen, it would do so quickly and with little warning.

DOMINANT MODEL: THE LANDLORD



Estimates vary greatly, even between local sources, but compared to other areas in Africa, Zimbabwe appears to have a relatively healthy elephant population of anywhere between 35,000 to 80,000 elephants.⁴ The majority are concentrated in three areas. The Save Valley Conservancy (a collection of 24 unfenced wildlife reserves) hosts a substantial proportion of Zimbabwe's elephant populations as well as the majority of its rhinos, and along with Chiredzi and Gonarezhou National Parks, is located in the lowveld of Masvingo along the borders with Mozambique and South Africa. In Matabeleland North, along the borders with Botswana and Zambia, is the Hwange National Park – home to the largest Zimbabwean elephant population – while further north in the Zambezi Valley along the border with Zambia is the Mana Pools elephant ecosystem.

Much of Zimbabwe's success in recovering and maintaining a fairly healthy elephant population is owed to a combination of policy and geography. Elephant ranges transect a variety of land use areas. National parks are state-owned and protected, conservancies are privately owned game reserves, and CAMPFIRE hunting areas are community-managed, with revenues from hunting licenses distributed among the local communities. Until recently, Zimbabwe was a leader in conservation and sustainable hunting; CAMPFIRE made it a pioneer in community-based conservation, while until international sanctions hit in the early 2000s, it also had one of the continent's premier safari hunting industries. Moreover, much of the elephant habitat in Zimbabwe was located in areas on the periphery of state control. Local operators were traditionally in a position to control hunting in their areas and funnel profits back into their homesteads, a symbiotic relationship that protected wildlife.

Zimbabwean elites have a high level of influence over wildlife habitats through direct corporate ownership of hunting and safari concessions, but also through often violent coercion that extends even into national parks.

ANALYSIS POWERED BY
Palantir

Smaller-level criminal networks are more prone to the distributor model; in the Hwange poisoning of 2013, nearly a ton of cyanide was indiscriminately distributed to villagers.

Today, however, incentives are changing. Resettlements around conservancies are on the rise, as are land invasions by 'war veterans' that often result in violent slaughters of wildlife.⁵ CAMPFIRE disbursements to local communities have steadily declined, on the order of 75-80% since 2000.⁶ The hunting industry has suffered under current sanctions, while land seizures by powerful Mugabe regime elites have reached the wildlife conservancies. This appears less ideological than profit-driven: safari and game reserves are today one of the few remaining lucrative sources of income, whether through legitimate hunting operations or the illicit harvesting of elephant ivory.

A State of Impunity

Across Zimbabwe, economic operations on wildlife range areas are being seized by Zimbabwe's political-military elites, including several on the United States sanctions lists. A wave of land seizures since 2008 has coincided with an upsurge in poaching and over-hunting. Zimbabwe, while landlocked, is well connected to important trafficking centers in South Africa and Mozambique and has close economic and strategic ties to China. There are sizable Chinese investments and diasporas inside Zimbabwe, several air cargo routes, and close personal connections between Zimbabwean elites and Chinese natural resource exploiters. Altogether, they make for a worrying combination of incentives, threatening a turn away from traditional sustainable models of conservation towards short-term extraction.

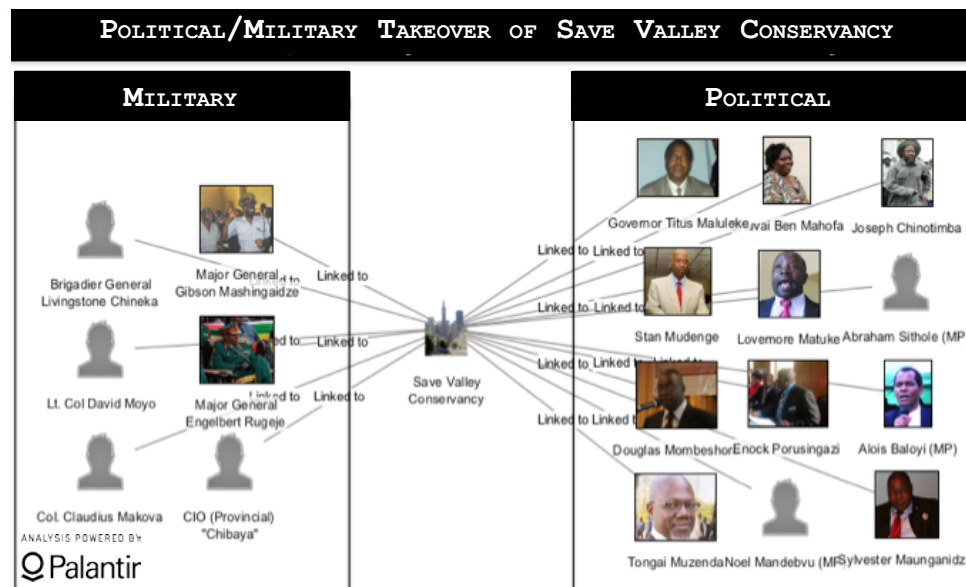
In modern Zimbabwe, a small coterie of Mugabe associates and cronies control nearly 40% of the 14 million hectares of land seized from farms and conservancies,⁷ which has long been a key component of Zimbabwe's patronage machine. While ostensibly aimed at providing poor Zimbabweans with land, in practice senior ZANU-PF officials have benefited the most from this redistribution and many now own multiple tracts of land. However, today many of these same politicians have run their existing landholdings into ruin. Some are now turning to the few remaining profitable safari hunting and tourism companies, a worrying trend given their histories of resource exploitation. The value of these conservancies in ecological terms is incalculable, but even in dollar terms they are significant: \$45 million in revenues was declared in 2013,⁸ which is a fraction of the value that can be captured by abusing hunting quotas or entering the illicit ivory trade. However, even if accurate, the figure represents an important lifeline of scarce foreign exchange as other opportunities have dried up under international sanctions.

Conditions have continued to worsen for the average Zimbabwean. The agricultural sector has traditionally been the backbone of Zimbabwe's economy, but it has never fully recovered from the productivity shocks of the country's land seizures in the last decade, despite putting more land under cultivation. One in three children in Zimbabwe today is malnourished,⁹ and bushmeat constitutes a significant part of many Zimbabweans' diets. Since 2009, the cash-strapped government has allowed elephant meat to be supplied to army barracks to feed hungry soldiers¹⁰ and civilian bushmeat poaching is reported to be similarly widespread.¹¹



Elephant Carcass on a Truck in Harare Suspected to have been Killed to Feed People Attending Independence Celebrations
Source: Johnny Rodrigues

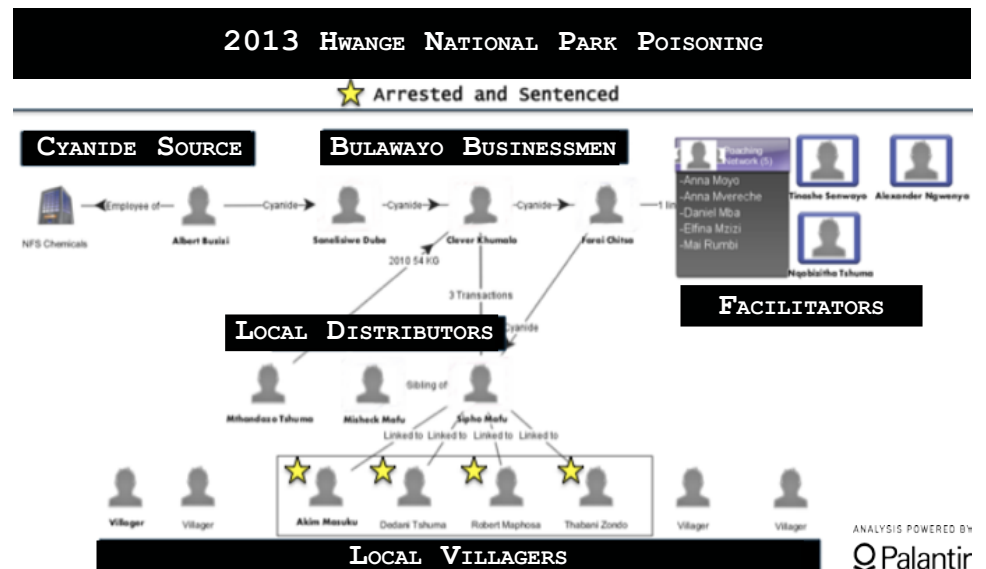
Putting aside hunting motivated by survival needs, widespread poaching is also believed to persist, with powerful patrons creating an environment of impunity. Certainly, the current wave of land seizures is not particularly covert, and the lists of (forcibly imposed) "partners" and beneficiaries of safari companies, hunting concessions, and conservancies today read



Names are collected from Zimbabwean and foreign reporting. Listing does not imply the violation of any law.
Source: C4ADS Open Source Collection

like a roll call of powerful state officials. This would not necessarily be a cause for concern by itself, were it not played out against a history of ZANU-PF officials plundering national resources for personal profit. Revenues accrued from the wildlife concessions being seized more often than not go straight into personal and foreign bank accounts, and not towards conservation. There is a wealth of anecdotal evidence of abuse on seized lands. Shuvai Mahofa, a former provincial MP is often accused in local newspapers of running hunting and commercial bushmeat operations on protected lands.¹² The general attitude, however, was perhaps best expressed by Masvingo Governor Titus Maluleke, another forcibly imposed beneficiary of Save Valley: “We are not interested in wildlife, we do not want to learn about the business. We want cash.”¹³

Zimbabwe’s elites are able to use their status to escape prosecution for wildlife-related offenses. A particularly notorious example came in July 2009, when a Chinese national was arrested at a police roadblock along the Hwange-Bulawayo Road coming from the direction of the Hwange National Park with six horns, still stained with blood. Upon interrogation, he implicated an unnamed businessman in Kwekwe, who in turn implicated two senior ZANU-PF officials – then-Defense Minister Emmerson Mnangagwa, now Minister of Justice, and a contender to replace Mugabe, and Webster Shamu, the former Minister of Publicity and Information – as leading members of a rhino horn syndicate that later was nicknamed the ‘Crocodile Gang.’¹⁴ The only reason the issue came to light was because a conscientious police officer dutifully logged the allegations in a police docket, which eventually made the news. At this point, the police docket vanished from Attorney General Johannes Tomana’s office, and the police superintendent in charge of the investigation was transferred to a remote rural post.¹⁵ In many ways the police inspector was lucky: Edwin Bhundani Nleya, a Zimbabwean Army Captain based in Hwange was hanged and murdered in 1989 after stumbling upon a military cartel smuggling rhino and elephant ivory,¹⁶ allegedly by then-Major and now Major General Douglas Nyikayaramba.¹⁷ This is hardly an isolated incident. A number of individuals involved in anti-poaching efforts were killed in suspicious circumstances during the 1990s,¹⁸ and intimidation remains widespread.



Names are collected from Zimbabwean and foreign reporting. Listing does not imply the violation of any law. Source: C4ADS Open Source Collection

Zimbabwe’s police have lagged in prosecuting even low-level poachers. The Hwange cyanide incident in 2013 was unusual in that its visibility and scale garnered international attention, prompting Zimbabwean authorities to act, although so far only ordinary villagers at the bottom of the value chain have been sentenced, with even low-level distributors receiving acquittals despite being apprehended with ivory. For more ordinary poaching cases,

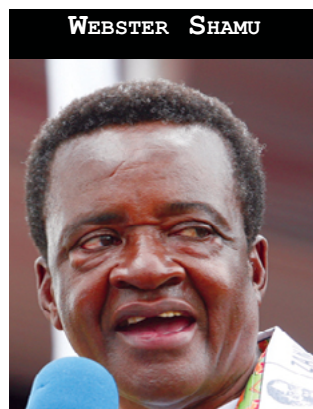
law enforcement remains weak – an assessment of 123 rhino poaching incidents between 2007 and April 2009 found that only 18 resulted in arrests, and of the individuals arrested in those incidents, less than 3% were actually convicted.¹⁹

The current wave of wildlife-related land seizures is centered around the Save Conservancy, home to 80% of Zimbabwe's rhinos²⁰ and the Gwayi conservancy, home to Zimbabwe's "Presidential Herd", and on the buffer of Hwange National Park. Since 2009, the move has accelerated. Under a new "wildlife-based land reform" policy, joint partnership arrangements have been imposed on operators in the Save Valley Conservancy, escalating the threat to one of Zimbabwe's most successful and ambitious conservation projects. Individuals with no connection to conservation or the local community, but with strong political connections, have been arbitrarily handed stakes. Few have shown any inclination to share in the cost of maintaining their new acquisitions, only in securing the revenues. Many have histories of exploitative business practices, muscling into firms, stripping them of all value, and moving on, which creates a high risk of systematic poaching on seized lands. It is unclear whether this is a centrally driven patronage scheme or the result of intra-ZANU-PF factional squabbles. None other than Mugabe himself has condemned the move, labeling it an overreach of authority and calling those who seized land "greedy,"²¹ but little has changed and in 2014, the process continues. There is some concrete evidence that poaching is already beginning: one ZANU-PF MP, Shuvai Mahofa, has already been implicated in poaching, with game meat turning up at a butcher's shop she owned, soon after she gained hunting rights to the Savuli Ranch in Save Valley Conservancy.²²

There may be further dispossession and consolidation ahead in Zimbabwe's wildlife areas, but even today the list of beneficiaries in the wildlife industries includes an array of the upper echelons of Zimbabwe's business, military, and political elites, as well as their family members. This list is far from comprehensive. Establishing direct links is often very complex as individuals attempt to disguise ownership through associates, family, and shell registrations. The list includes individuals from several different regions, backgrounds and political factions (within the ZANU-PF umbrella), but all share some glaring traits.

Few have any experience in conservation, wildlife, or tourism, but most have backgrounds of corruption and violence. Several are already on the US Specially Designated Nationals sanctions lists, although few of their wildlife-related assets have been designated. Several of these individuals were named to C4ADS by Zimbabwean sources. We have cross referenced these individuals to the best of our ability using public records, company websites, local and international media, and US sanctions lists. As previously stated, none of the following constitutes an allegation of current involvement in elephant or rhino poaching; rather, the goal is to increase transparency in Zimbabwe's land-ownership and wildlife-management sectors.

ZANU-PF Officials with Wildlife Interests



(*SDN Designated*), Minister of State for Policy Implementation, owns Famba Safaris (*SDN Designated*). Through these companies, he is alleged to control hunting concessions in Chirisa and Chete parks, while his wife Constance Tsomondo once ran a company named Bamakino Safaris.²³ Shamu was prominently named as a beneficiary of the "Crocodile Gang" rhino poaching scandal, although there has been no credible investigation.²⁴