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CENTER ON IRREGULAR WARFARE AND ARMED GROUPS



Wildlife Trafficking and Poaching: Contemporary Context and Dynamics for Security Cooperation and Military Assistance

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**Wildlife Trafficking and Poaching:
Contemporary Context and Dynamics for
Security Cooperation and Military Assistance**

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Message from the Editors

In 2008, the Naval War College established the Center on Irregular Warfare & Armed Groups (CIWAG). CIWAG's primary mission is twofold: first, to bring cutting-edge research on Irregular Warfare into the Joint Professional Military Educational (JPME) curricula; and second, to bring operators, practitioners, and scholars together to share their knowledge and experiences about a vast array of violent and non-violent irregular challenges. This case study is part of an ongoing effort at CIWAG that includes symposia, lectures by world-renowned academics, case studies, research papers, articles, and books. Our aim is to make these case studies part of an evolving and adaptive curriculum that fulfills the needs of students preparing to meet the challenges of the post-9/11 world.

Dr. Chris Jasparro's case study on poaching analyzes the intricate web of greed and grievances that drive illicit poaching and smuggling networks across the continent of Africa. Jasparro blends his years of field research on the topic with his background as a geographer to both paint broad-brush pictures of how criminals profit from illicit networks and provide detailed recommendations on how to address these challenges. Classroom instructors should find the questions at the end of the case study a solid foundation for instruction and essay assignments. Practitioners and scholars focused on how criminal networks function and exploit seams and gaps in coverage and policy should find the recommendations a nuanced discussion on how to respond to this challenge.

It is important to note two critical caveats to this case study. First, the opinions found in this case study are solely those of the author and do not represent the views of the Department of Defense, the U.S. Navy, the Naval War College, or CIWAG. Second, while every effort has been made to correct any factual errors in this work, the author is ultimately responsible for the content of this case study.

Jasparro: *Wildlife Trafficking and Poaching*

We hope you find this case study useful, and look forward to hearing your feedback and suggestions for how you can contribute to the Center on Irregular Warfare & Armed Group's mission here at the Naval War College.

Author Biography

Dr. Chris Jasparro is an associate professor of National Security Affairs at the U.S. Naval War College, as well as a senior associate at CIWAG and the director of the Africa Regional Study Group at the NWC. He is a geographer and former U.S. Navy Reserve officer, specializing in regional, transnational, and environmental security issues, with field experience in cultural and natural resource protection.

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I. Introduction

Around 5:30 a.m. on 14 August 2017, gunfire shatters the early morning calm as terrorists launch a coordinated attack against a UN peacekeeping camp in Douenza, Mali. Heeding calls for assistance, members of Mali's joint army/wildlife range anti-poaching brigade respond to the assault and help beat it back. Brigade member Corporal Souleymane Tangara is killed during the battle, along with eight other UN and Malian security forces personnel. A week later, his widow will give birth to twin daughters.

Four days later, on 18 August, the body of 37-year-old Gabriel Ramos Olivera, a ranger and biologist, was found in Chacahua National Park in Oaxaca, Mexico, a sanctuary for endangered leatherneck turtles and crocodiles. He had been shot and killed by suspected poachers. That same day in Brazil, three rangers in Serra da Capivara National Park and UNESCO World Heritage Site were ambushed by illegal hunters. Two rangers were wounded and one, Edilson Aparecido dos Santos, was killed.

Wildlife crime, which includes poaching and trafficking, has emerged as a significant international security issue, sharing commonalities and often intersecting with other transnational and irregular security threats. This has led to the direct involvement of military forces and application of military-like approaches to combat it in affected countries, as well as the provision of military assistance from external countries.

However, wildlife crime is a highly complex phenomena with unique dimensions that can render military assistance ineffective or counterproductive if not adequately considered. Consequently, military assistance must be tailored to the particular threat. Commercial transnational poaching in Botswana, for example, is treated as a national security threat that the military has been tasked to combat; commercial poachers may be subject to a shoot-to-kill policy. Local subsistence poaching, on the other hand, is treated as a law enforcement and development issue and countered with less harsh and more nuanced approaches.

The main aim of this case study is to place wildlife crime in a strategic context and to provide a primer on the dynamics of wildlife trafficking and poaching to help military personnel engaged in planning, designing, or participating in security cooperation and military assistance activities for anti-poaching (AP) and counter wildlife trafficking (CWT) better tailor and more effectively conduct their activities. The case begins with an overview of trends in wildlife crime—its emerging strategic and security dimensions that are providing the rationale and demands for military assistance and responses to combat it. This is followed by a detailed discussion of different modes of poaching and trafficking and their unique dimensions that personnel should be cognizant of in designing security cooperation and assistance programs in order to maximize effectiveness and minimize the risk of unintended negative effects. The case study concludes with questions that can be used to guide the development of security cooperation efforts and types of assistance.

II. Contemporary Context

Until recently, wildlife crime was rarely, outside of a few countries, discussed in terms of international and national security, but rather spoken about in the language of conservation and crime. Today, it is increasingly being framed as an international and national security threat, with many governments and nongovernmental organizations (NGOs) worldwide calling for increased external military support for anti-poaching forces. The linking of wildlife crime with security and related calls for military assistance for AP/CWT have been driven by three factors: (1) the dramatic reduction in specific animal populations (especially elephants and rhinos), (2) the militarization and professionalization of poachers and the violence they employ, and (3) the convergence of poaching with other transnational crimes and, in certain places, conflict and terrorism.

In 2013, UN Secretary General Ban Ki-Moon stated, “Poaching and its potential linkages to other criminal, even terrorist, activities constitute a grave menace to sustainable peace and security in Central Africa. In this regard, I urge Governments of the subregion to consider the issue of poaching as a major national and subregional security concern requiring their concerted and coordinated action.”¹ Similarly, a 2013 U.S. Executive Order proclaimed, “The poaching of protected species and the illegal trade in wildlife and their derivative parts and products (together known as ‘wildlife trafficking’) represent an international crisis that continues to escalate. Poaching operations have expanded beyond small-scale, opportunistic actions to coordinated slaughter commissioned by armed and

¹ Ban Ki-Moon, *Report of the Secretary-General on the Activities of the United Nations Regional Office for Central Africa and on the Lord’s Resistance Army-Affected Areas* (New York: United Nations, May 2013), accessed March 2, 2018, http://www.un.org/ga/search/view_doc.asp?symbol=S/2013/297.

organized syndicates.”² In a 2014 briefing to Congress, retired Army general and former Commander of U.S. Africa Command (AFRICOM) Carter Ham stated, “I hope Congress and others would encourage the U.S. Department of Defense to take this on—not as a top mission but as a mission.”³

In February 2014, 42 countries signed the London “Declaration on Illegal Wildlife Trade” in which the signatories agreed to, among other things, treat “poaching and trafficking as a serious organized crime in the same category as drugs, arms, and people trafficking.”⁴ Similarly in 2015, President Uhuru Kenyatta of Kenya announced that Kenya and Tanzania had “agreed to scale up cooperation in the war against terrorism, drug trafficking and poaching.”⁵ Also in 2014, *The National Strategy for Combating Wildlife Trafficking* was released to outline U.S. strategic priorities and provide a roadmap for a whole-of-government approach across the chain of wildlife crime;⁶ and, with bipartisan support, the U.S. Congress passed the 2016 Eliminate, Neutralize, and Disrupt (END) Wildlife Trafficking Act, which authorized the provision of “defense

² Barak Obama, *Executive Order--Combating Wildlife Trafficking* (Washington, DC: White House, July 2013), accessed March 21, 2016, <https://whitehouse.gov/the-press-office/2013/07/01/executive-order-combating-wildlife-trafficking>.

³ Anna Mulrine, “To Combat Terror, Pentagon Should Help Fight African Poaching, Ex-General Says,” *Christian Science Monitor*, September 12, 2014.

⁴ Peter Wilson, “The London Declaration’s Role in the Fight Against Wildlife Trade,” *UN Chronicle*, September 2014, accessed September 1, 2017, <https://unchronicle.un.org/article/london-declaration-s-role-fight-against-wildlife-trade>.

⁵ *Business Daily Africa*, “Kenya, Tanzania Step Up War on Poaching, Terrorism, Drugs,” October 5, 2015, <https://www.businessdailyafrica.com/Tanzania-step-up-war-on-poaching/539546-2900038-s67k6nz/index.html>.

⁶ *The National Strategy for Combating Wildlife Trafficking* (Washington DC: White House, 2014), accessed May 10, 2017, <https://www.fws.gov/home/feature/2014/trafficking/national-strategy-wildlife-trafficking.pdf>.

articles, services, and training to the security forces of a country of concern to counter wildlife trafficking and poaching.”⁷

Action on the ground has paralleled political rhetoric, in what has been called “green militarization,” whereby military and military-like “actors, techniques, technologies, and partnerships” are used in pursuit of conservation goals.⁸ For example, in 2011 the South African National Defence Force (SANDF) deployed two companies to Kruger National Park. Similarly, in March 2013, Chad, Cameroon, and the Central African Republic initiated the Extreme Emergency Anti-Poaching Plan, which included mobilizing Chadian and Cameroonian military forces to fight poaching. Anti-poaching is also a mission for other militaries, including those of Botswana, Mali, Tanzania, Gabon, and Mozambique.

Western military support against poaching has correspondingly become more common. For instance, British troops have deployed to train anti-poaching forces in Gabon, Kenya, and Malawi, and the British Army has even formed its own specialist anti-poaching unit.⁹ U.S. AFRICOM has trained anti-poaching forces in Chad and Tanzania¹⁰ and collaborated with

⁷ Summary: S.2385 – 114th Congress (2015-2016), accessed March 24, 2017, <https://www.congress.gov/bill/114th-congress/senate>.

⁸ Elizabeth Lunstrum, “Green Militarization: Anti-Poaching Efforts and the Spatial Contours of Kruger National Park,” *Annals of the Association of American Geographers*, 104:4 (2014), 816.

⁹ Marco Giannageli, “Tartan Army Sent In to Protect Elephants from Poachers,” *Express*, October 25, 2015; Adam Vaughn, “British Army Joins Fight Against Elephant and Rhino Poaching,” *The Guardian*, November 1, 2013; Ben Farmer, “New Army Specialists to Hunt African Wildlife Poachers and Revive Tracking Skills,” *The Telegraph*, August 14, 2017, accessed September 1, 2017, <http://www.telegraph.co.uk/news/2017/08/14/new-army-specialists-hunt-african-wildlife-poachers-revive-tracking/>

¹⁰ John Platt, “Elephant Poachers Have a New Problem: U.S. Marines,” *Takepart*, May 24, 2014, accessed March 25, 2016, www.takepart.com/article/2014/05/24/elephant-poachers-have-new-problem-marines; Eric Summers, “U.S. Soldiers Team with Tanzania Rangers to Combat Poaching,” *Army.mil*, September 12, 2016, accessed August 30, 2017, https://www.army.mil/article/1748964/us_soldiers_team_with_tanzania_rangers_to_combat_poaching.

anti-poaching organizations in Congo.¹¹ The U.S. Marines Corps' Special Purpose Marine Air-Ground Task Force Crisis Response – Africa has trained Gabonese Armed Forces soldiers and park rangers in patrolling, mission planning, and combat marksmanship.¹²

Wildlife NGOs are militarizing as well, whether in terms of providing military-style advising, training, and equipping or directly supporting or conducting anti-poaching operations, investigations, and intelligence. Private military corporations and former military personnel are also working for traditional wildlife NGOs or forming their own anti-poaching organizations.¹³

¹¹ African Parks, *Update: Garamba National Park's Poaching Crisis*, September 1, 2014 <https://www.african-parks.org/newsroom/press-releases/update-garamba-national-parks-poaching-crisis>

¹² Alexander Mitchell, *Marines.Mil*, "Gabon, U.S. Train to Fight Illicit Activity, January 2017, <http://www.marines.mil/News/News-Display/Article/1044724/gabon-us-train-to-fight-illicit-activity/>

¹³ Alison Morrow and Susan Wyatt, "Anti-Poaching Battlefield Draws U.S. Veterans," *Military Times*, September 27, 2015, accessed September 28, 2015, <http://www.militarytimes.com/story/veterans/2015/09/07/anti-poaching-battlefield-draws-us-veterans/72673584/>; Darren Taylor, "Iraq War Veteran Battles Rhino Poachers in Africa," *VOANEWS*, January 29, 2012, accessed September 27, 2012, voanews.com/a/Iraq-war-veteran-battles-rhino-poachers-in-africa-138338229/159563.html.



Figure 1. Volunteer anti-poaching unit member, undisclosed location, South Africa
(photo credit: Chris Jasparro)

Often missing from rhetoric and policy impetus for giving military support for CWT is a crucial element:

an elaboration on both the precise nature of the security threat posed . . . [P]oaching and wildlife trafficking are labelled simultaneously as drivers of conflict, market openings for organized criminals, and facilitators of terrorism—often without reference to concrete cases in point. The result is a growing acceptance of the new

industrial-scale poaching and wildlife trafficking as a security threat without sufficient clarity on the type of poaching and wildlife trafficking posing the threat; the individuals and groups who pose this threat; or the communities whose security is threatened.¹⁴

This does not mean strategic and security rationale for security cooperation do not exist. However, inadequate understanding and reductionist views of wildlife crime and its security implications increase the risks of security cooperation efforts that are either ineffective or counterproductive. This case study hence attempts to provide an in-depth and contextualized look at wildlife crime as a security threat.

¹⁴ Cathy Haenlein and MLR Smith, *Poaching, Wildlife Trafficking and Security in Africa: Myths and Realities* (Abington, UK: Royal United Services Institute for Defence and Security Studies, 2016), 1.

III. Overview of Trends

A Vietnamese woman with a late-stage cancer pays \$2,000 for a vial of rhino horn powder, desperately hoping for a cure in a country with a cancer mortality rate of 73%, one of the world's highest. Nearby, a wealthy businessman takes a rhino horn powder "detox" to treat a hangover from the previous night's partying. In China, a man receives a set of ivory chopsticks for a present. Because of its combination of durability, carveability, and beauty, over the centuries ivory has acquired the status of a luxury good. (China banned ivory sales in 2017, the U.S. in 2016).



Figure 2. Rhino, undisclosed location, South Africa (photo credit: Chris Jasparro)

In an African port city, an official enjoys a new car paid in part from bribes exacted from wildlife traffickers. In a rural village, a porter spends some of his income on food for his young children (a normal income in the area is under \$1 a day), while down the street one of his counterparts spends all his earnings on beer. At the other end of the Indian Ocean, a criminal gang smuggles a shipment of ivory and other illicit goods. They will celebrate in royal style that night with their earnings.

Deep in the central African bush, an anti-poaching unit, wary of an ambush, follows the smell of death to a clearing where an elephant carcass lies. Its head is defaced where it was shot; poachers ripped out its tusks and dug out the bullet in order to remove forensic evidence. A gash lies along the elephant's back where its spine was slashed by an ax to immobilize so it could be de-husked while still breathing. Its severed trunk sits in the dust a few meters away where the poachers tossed it.

Several hundred miles further south, a team of reserve management personnel on a morning survey find a female rhino dead, here face hacked up and a stump where her horn used to be. Next to her is the body of her calf, also killed. The reserve personnel have known, studied, and protected this rhino for years and keenly feel the loss. From the other side of the reserve's fence, a subsistence hunter eyes impala he is no longer allowed to hunt. Later in the day, a recruiter for a local commercial ring will tempt him with job as a guide for a poaching team due to arrive in a few days from a bordering country.

The United Nations Office on Drugs and Crime (UNODC) estimates the value of illegal wildlife trafficking at US\$10 billion to \$20 billion annually.¹⁵ The illegal market for tiger parts (including skins and raw bones) is worth an estimated US\$5 million a year; only about 3,000 wild tigers are left, down from 100,000 at the start of the 20th century.¹⁶ Each year, Africa loses between 5% and 7% of its elephants to poaching.¹⁷ Elephants and rhinos accounted for 18% and 3%, respectively, of global wildlife seizures between 2005 and 2014.¹⁸ In 2013, 20,000 elephants were killed for ivory worldwide; and in 2014, 1,215 rhinos were killed in South Africa alone, versus 122 in 2009.¹⁹

¹⁵ International Consortium on Combating Wildlife Crime, *World Bank Development Facility* (New York: UNODC, 2013), accessed March 30, 2016, https://www.unodc.org/documents/sustainable-livelihoods/UNODC_ICCWC_report_2013.pdf.

¹⁶ UNODC, *The Globalization of Crime: A Transnational Organized Crime Threat Assessment* (UNODC: 2010), accessed May 1, 2017, http://unodc.org/documents/data-and-analysis-tocta/TOCTA_Report_2010_low_res/pdf.

¹⁷ Vira Virun, Thomas Ewing, and Jackson Miller *Out of Africa: Mapping the Global Trade in Illicit Elephant Ivory* (Washington, DC: Center for Advanced Defense Studies, August 2014), 3.

¹⁸ UNODC, *World Wildlife Crime Report: Trafficking in Protected Species* (New York: United Nations, 2016), 14.

¹⁹ "Wildlife Trafficking," *Havoscope Global Black Market Information*, accessed March 26, 2016, www.havoscope.com/tag/wildlife-trafficking/.

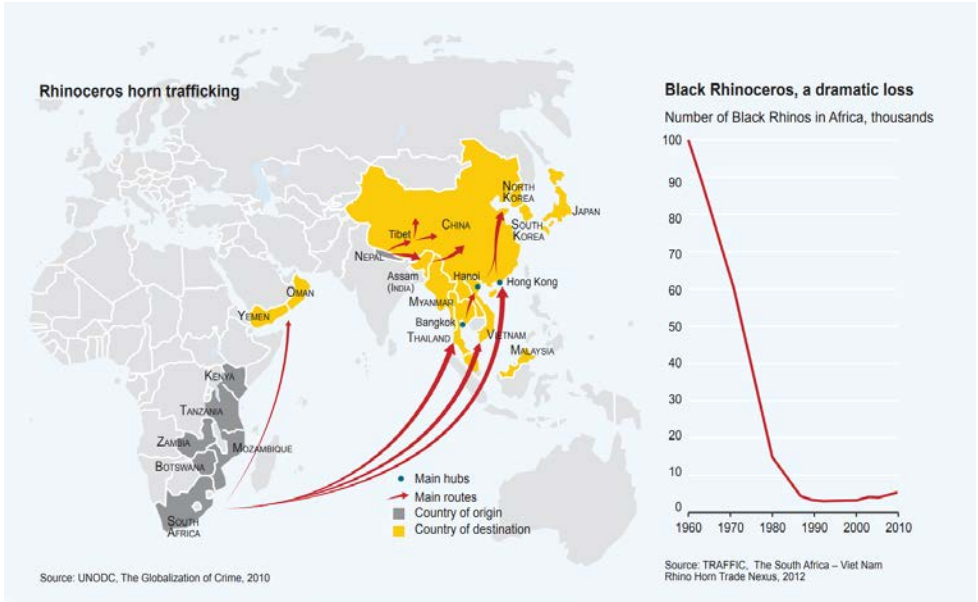


Figure 3. Rhino Trafficking and Species Loss (credit: Riccardo Pravettoni, GRID Arendal <http://grid-arendal.herokuapp.com/resources/7487>)

In addition to iconic large mammals, over 7,000 other species are targeted by wildlife crime; reptiles accounted for 9% of wildlife seized between 2005-2014, and pangolins, whose meat can fetch up to US\$350 per kilo in Asia,²⁰ accounted for 5%.²¹ Helmeted hornbills are poached in Southeast Asia for their keratin (the same material that makes up rhino

²⁰ Nathan Young, "Poaching Facts," 2017, accessed May 10, 2017, www.poachingfacts.com/encyclopedia/pangolin-profile.

²¹UNODC, *World Wildlife Crime Report: Trafficking in Protected Species* (New York: United Nations, 2016).

horns) helmets. Known as “red ivory” in China,²² it can fetch up to \$8 per gram—up to five times the cost of elephant ivory on the black market.²³

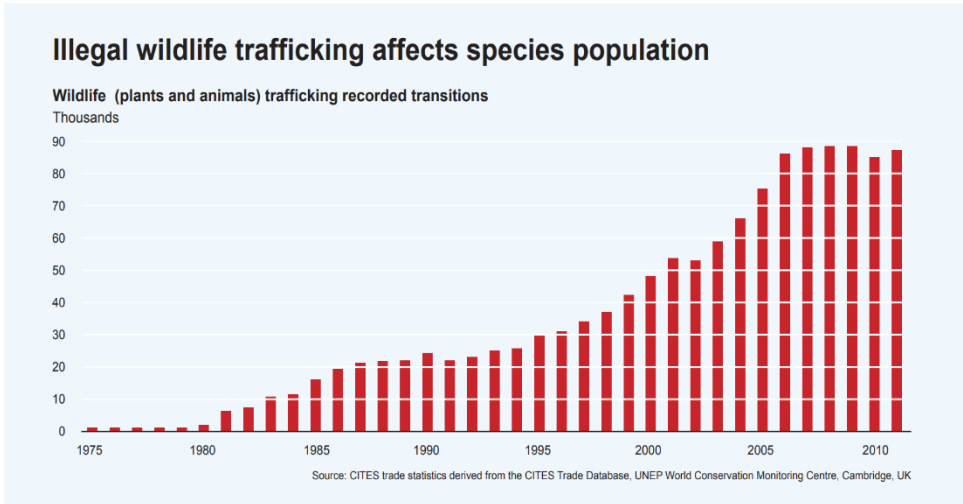


Figure 4. Wildlife Trafficking and Species Population (credit: Riccardo Pravettoni, GRID Arendal <http://grid-arendal.herokuapp.com/resources/7487>)

The violence is not limited to animals, however. According to the Thin Green Line Foundation, over 1,000 park rangers were killed worldwide between 2006 and 2016.²⁴ Over 70% of African rangers surveyed by the World Wildlife Federation (WWF) claimed have faced life-

²² Rachel Bale, “These Rare Birds Are Being Slaughtered for Their Ivory,” *National Geographic News*, March 16, 2016, accessed May 10, 2017, news.nationalgeographic.com/2016/03/160316-helmeted-hornbill-trafficking-smuggling-red-ivory/.

²³ Doug Janson, “Spectacular Helmeted Hornbill Could Be Wiped Out by Chinese Demand for ‘Avian Ivory,’” *The Conversation*, November 16, 2015, accessed May 10, 2016, theconversation.com/spectacular-helmeted-hornbill-could-be-wiped-out-by-chinese-demand-for-avian-ivory-50349.

²⁴ <https://www.thingreenline.org.au/story/>

threatening situations from either poachers or local communities,²⁵ and 29% of rangers in Asia reported having been attacked by poachers.²⁶ The bloodshed is two-way: for example, between 2008 and 2015, 220 Mozambican poachers were killed.²⁷

Current trends notwithstanding, it is important to remember that large-scale militarized poaching is not a new phenomenon. According to Vira and Ewing, Africa's first wave of contemporary large-scale ivory poaching was "born in war" in the 1970s and 1980s when up to 100,000 elephants per year were being killed, many by "a wide array of African armies and militias seeking to feed and fund their forces."²⁸ Wars in central and eastern Africa decimated elephant populations in Sudan, Kenya, Central African Republic, Zaire, and Uganda. In southern Africa, poaching and trafficking of ivory and rhino horn from Angola, Mozambique, and Rhodesia (now Zimbabwe) became institutionalized by Rhodesian and South African forces to fund their operations.²⁹

Today, however, the renewed intensification of large-mammal poaching, combined with a deepening intersection of poaching and wildlife trafficking with high levels of violence and other transnational crimes—and in some places conflict and terrorism—are driving calls for military involvement and are attracting the interest of the U.S. and other influential international actors. Robust protection and interdiction efforts are often the

²⁵ WWF, *Ranger Perceptions Africa* (Washington, DC: WWF, 2016), accessed July 21, 2017, https://c402277.ssl.cf1.rackcdn.com/publications/880/files/original/Ranger_Perception_Africa_%28FINAL%29.pdf?1464013250

²⁶ WWF, *Ranger Perceptions Asia* (Washington, DC: WWF, 2016), accessed July 21, 2017, https://c402277.ssl.cf1.rackcdn.com/publications/861/files/original/Ranger_Perception_Survey_%28Asia%29.pdf?1456408489

²⁷ Alec Russell, "Rhino Poaching: Inside the Brutal Trade," *Financial Times*, October 2, 2015, accessed September 1, 2017, <https://www.ft.com/content/f71d53ea-67b3-11e5-97d0-1456a776a4f5>

²⁸ Varun Vira and Thomas Ewing, *Ivory's Curse: The Militarization and Professionalism of Poaching in Africa* (Washington, DC: Center for Advanced Defense Studies, 2014), 8.

²⁹ *Ibid.*, 8.

only viable emergency options in areas where poachers count among their ranks militarized actors such as former non-state combatants, insurgents, and corrupt military personnel and employ military-grade weaponry and tactics against the generally lightly armed and thinly spread ranger, law enforcement, and border forces who have traditionally assumed wildlife protection roles. Militaries are often the only actors with the training, weaponry, and numbers who can either confront heavily armed, militarized poachers or provide the training, material, and/or enabling support that paramilitary ranger and law enforcement services need.

Furthermore, the line between wildlife crime and other threats can be hard to distinguish, and wildlife protection units are also sometimes called upon to support other security operations. For instance, in July 2017, unidentified armed men attacked a group of rangers and journalists in Congo's Okapi Wildlife Reserve, killing four rangers and one porter. Rangers participated in a joint mission with Congolese army troops to find and recover the killed and missing persons.³⁰ In 2017, Mali formed a combined wildlife ranger-army brigade to combat elephant poaching, "a necessary pairing for protecting wildlife in this hostile territory, regularly crisscrossed by offshoots of Al Qaeda and bandits," both of which engage in poaching.³¹ Since its inception, the brigade has endured IED strikes and fought off ambushes; on August 14, 2017, a brigade member was killed as the unit responded to calls from UN peacekeepers whose base in Douentza

³⁰ *Details on July 14 Attack in Okapi Wildlife Reserve*, July 20, 2017, accessed, September 1, 2017, <https://www.okapiconservation.org/details-on-july-14-attack-in-okapi-wildlife-reserve/>

³¹ Mark Rivett-Carnac, "Mali's Desert Elephants, on Edge of Annihilation, Get a Fighting Chance," *New York Times*, October 29, 2017, <https://www.nytimes.com/2017/10/29/world/africa/mali-elephants-gourma.html>

was being attacked by jihadists. Two attackers and a UN peacekeeper were also killed.³²

³² Naomi Larsson, "Three More Rangers Killed in a Deadly Month Around the World for Wildlife Defenders," *The Guardian*, August 23, 2017, accessed March 14, 2017, <https://www.theguardian.com/environment/2017/aug/23/rangers-killed-deadly-month-wildlife-defenders>

IV. Strategic and Security Dimensions of Wildlife Crime

The trends discussed above provide the basis for viewing wildlife crime as a threat to U.S. strategic interests and international security, due to its effects on governance and development, homeland and border security, health, and convergence with other security issues such as transnational crime, conflict, and terrorism. Wildlife crime's impacts in these areas intersect with several strategic objectives and priority actions outlined in the most recent U.S. *National Security Strategy* (NSS), including securing U.S. borders, combating biothreats and pandemics, dismantling transnational criminal organizations (and their subsidiary networks), building capable partner security forces, and strengthening rule of law. They also intersect with specific regional military objectives, such as to "improve the ability of [African] security services to counter terrorism, human trafficking, and the illegal trade in arms and natural resources" in Africa and to "reduce crime and corruption by supporting local efforts to professionalize police and other security forces . . . and disrupt illicit trafficking" in the Western Hemisphere.³³

A. Governance and Development

The lucrative nature of wildlife crime can act as a "force multiplier" to the overall impacts of transnational and organized crime on governance and development. The combined effects are concerning because "as organized crime eats away at governance and stability, countries can become locked in a vicious circle where social trust is lost and both rule of

³³ Donald Trump, *National Security Strategy of the United States* (Washington, DC: The White House, 2017).

law and economic growth are undermined.”³⁴ Widespread and systemic corruption facilitate wildlife crime, while its lucrative nature in turn provides further opportunities for corruption, which can weaken the legitimacy of governments, undermine rule of law, and contribute to instability and state fragility. According to the U.S. National Intelligence Council, wildlife crime “exacerbates corruption by introducing high-value illegal products to influential individuals along the supply chain,”³⁵ including politicians, law enforcement, and military personnel. This corruption reduces government effectiveness, civil society engagement, and public trust in the state.³⁶ Criminal syndicates pay off judges and security officials and operate on a “take-the-money-or-the-bullet” approach, causing officials to look the other way.³⁷

A recent investigation by the *Economist* revealed that some Tanzanian soldiers rented out weapons to poachers while police personnel escorted illegal ivory shipments.³⁸ Rangers, particularly underpaid ones, are especially vulnerable to corruption. Sean Willmore, president of the International Ranger Federation, says that corruption across the world “is as bad as I have known it. If rangers are not getting enough remuneration they can be corrupted. In Cambodia, for example, rangers were being paid \$100 per month and that was cut to \$30 per month. . . . What do you do if

³⁴ Ibid, 60.

³⁵ National Intelligence Council, *Wildlife Poaching Threatens Economic Security Activities in Africa* (Washington DC: National Intelligence Council, 2013), accessed June 20, 2016, <https://www.hsdl.org/?view&did=744406>, 5.

³⁶ Ibid, 5.

³⁷ Maurice Oniango and Andrew Ochieng, “Corruption and Poaching, the Tusk at Hand,” *Africa.com*, June 13, 2016, accessed June 20, 2016 www.africa.com/corruption-poaching-tusk-hand/.

³⁸ “Big Game Poachers,” *The Economist*, November 8, 2014, accessed 21 June 2016, www.economist.com/news/middle-east-and-africa/21631202-claims-links-between-politicians-poachers-merits-further-investigation-big.

you want to feed your family?”³⁹ Pratik Patel, CEO of the African Wildlife Trust, posits that 50% of African wildlife rangers may be corrupt.⁴⁰

On the other hand, wildlife can be an important economic and development resource.⁴¹ Wildlife tourism (which often combines with and helps generate other tourism activities) is growing globally by 10% per annum, with about half of all trips taking place in Africa.⁴² International tourism to Africa was valued at least \$34.2 billion in 2013, and wildlife tourism comprised the largest part of this figure. Tourism alone accounts for 12% of Kenya’s GDP.⁴³

Large-scale poaching can have both direct and indirect effects on food security through over-hunting and by contributing to environmental change. Wildlife and megafauna help maintain biodiversity and ecosystems that provide crucial resources, such as viability of watersheds and grasslands. Over-hunting of seed-dispersing animals such as primates and other animals in tropical rainforests can alter forest dynamics and add to the deforestation that is exacerbating climate change.⁴⁴ Further, protein supplies from bushmeat in African forest regions are expected to decline by

³⁹ Oliver, Milman, “Ranger Corruption, Impeding Global Fight Against Poaching,” *The Guardian*, March 27, 2013, accessed 19 June 2016, <https://www.theguardian.com/environment/2013/mar/27ranger-corruption-impeding-fight-poaching>.

⁴⁰ Ibid.

⁴¹ Note that development of wildlife tourism can also lead to conflict if pursued without regard to local stakeholders; see, for example, L.R. Douglas and K. Alie, “High-Value Natural Resources: Linking Wildlife Conservation to International Conflict, Insecurity, and Development Concerns,” *Biological Conservation* 171 (2014), 274.

⁴² World Tourism Organization, *Towards Measuring the Economic Value of Wildlife Watching Tourism in Africa – Briefing Paper* (Madrid: UNWT 2014), 6 and 16.

⁴³ Philip Muruthi, “The Economics of Africa’s Wildlife,” *World Economic Forum*, March 3, 2015, accessed May 12, 2017, <https://www.weforum.org/agenda/2015/03/the-economics-of-africas-wildlife/>.

⁴⁴ Bushmeat Crisis Task Force, *Bushmeat: A Wildlife Crisis in West and Central Africa and Around the World* (Washington, DC: BCTF, 2009), accessed June 22, 2015, www.bushmeat.org/sites/default/files/BCTFBRIE.pdf.

80% by 2050.⁴⁵ Food insecurity can in turn drive migration and political instability.⁴⁶

B. Homeland and Border Security

After China, the U.S. is the second largest market in the world for wildlife products, but as much as 30% of imports may be illegal.⁴⁷ Criminals trafficking wildlife routinely compromise the integrity of U.S. borders and those of allied states. For instance, nearly 25% of the 50,000 illegal shipments of wildlife and wildlife products seized between 2005 and 2015 at U.S. points of entry originated from Latin America. Such trafficking provides pathways along which other illicit products and pathogens could enter the U.S.

C. Infectious Disease

Wildlife trading and trafficking provides pathways for disease transmission that have caused disease outbreaks in humans and livestock, disrupted trade and ecosystems, and cost “hundreds of billions of dollars of economic damage globally,” according to the Wildlife Conservation

⁴⁵ P. Lindsey et al., *Illegal Hunting and the Bush-meat Trade in Savannah Africa: Drivers, Impacts, and Solutions to Address the Problem* (New York: Panthrea/Zoological Society of London/Wildlife Conservation Society, 2012), 14.

⁴⁶ Hunger Without Borders, *The Hidden Links Between Food Insecurity, Violence, and Migration in the Northern Triangle of Central America* (Washington, DC: World Food Program/International Organization for Migration/Organization of American States, 2015), accessed March 1, 2017, documents.wfp.org/stellent/groups/public/documents/liaison_offices/wfp27754.pdf?_ga=1.123237065.33748124.1485965097

⁴⁷ Darryl Fears, “Overwhelmed U.S. Port Inspectors Unable to Keep Up with Illegal Wildlife Trade,” *Washington Post*, October, 17, 2017, accessed 24 March 2017, https://www.washingtonpost.com/national/health-science-overwhelmed-us-port-inspectors-unable-to-keep-up-with-illegal-wildlife-trade/2014/10/17/2fc72086-fe42-11e3-b14-8e7c632c07b_story.html?utm_term=.95255ef3115.

Society.⁴⁸ For instance, reptiles and amphibians often carry salmonella (74,000 cases annually in the United States) while monkeys and rodents can carry herpes B, monkeypox, and rabies.⁴⁹ The H5N1 influenza virus (“bird flu”) has been found in eagles from Thailand smuggled to Belgium via plane travel.⁵⁰ Outbreaks of HIV, Ebola, and SARS have all been linked to bushmeat hunting and wildlife trading.⁵¹ Scientists from the Smithsonian have identified a possible link between declining populations of large wildlife such as rhinos and elephants and a rise in rodents and fleas that vector zoonotic diseases, diseases that jump from animals to humans—which account for about 60% of human pathogens.⁵²

D. Threat Convergence

The shift from treating wildlife crime as a conservation issue to treating it as a broader security issue is largely related to concerns that it is intersecting with other forms of organized crime and may be becoming a source of terrorist and conflict funding. Since wildlife crime generally poses relatively low risks versus potential gains, “the appeal of engagement by

⁴⁸ William Karesh, Robert Cook, and James Newcomb, “Wildlife Trade and Global Disease Emergence,” *Emerging Infectious Disease* 11:7 (2005), 1000.

⁴⁹ “Facts About the Exotic Pet Trade”, accessed March 2, 2017, www.animalplanet.com/tv-shows/fatal-attractions/lists/facts-exotic-pet-trade 2009/2010.

⁵⁰ Steven van Borm, “Highly Pathogenic H5N1 Influenza Virus in Smuggled Thai Eagles, Belgium,” *Emerging Infectious Diseases* 11:5 (2005).

⁵¹ William Karesh, Robert Cook, and James Newcomb, “Wildlife Trade and Global Disease Emergence,” *Emerging Infectious Diseases* 11:7 (2005), 1001.

⁵² Hilary Young et al., “Declines in Large Wildlife Increase Landscape Level Prevalence of Rodent-Borne Disease in Africa,” *Proceedings of the National Academy of Sciences* 11:19 (2014), 7036.

organized crime groups not traditionally associated with wildlife appears strong.”⁵³

Wildlife crime has become integrated with broader transnational criminal dynamics as specialized actors intersect with logistical and transport chains that deal in multiple types of crime. For example, Latin American drug trafficking organizations have hid cocaine in animal products, including live specimens, and trade wildlife products or drugs as a form of money laundering.⁵⁴ Abalone smuggling has provided an entry for Chinese organized crime and drug trafficking syndicates in southern Africa.⁵⁵ Chinese gangs have since diversified into trafficking of other wildlife products such as ivory, rhino horn, and shark fins, as well as drug trafficking and smuggling of migrants and contraband goods.⁵⁶

⁵³ Cathy Haenlein and MLR Smith, *Poaching, Wildlife Trafficking, and Security in Africa: Myths and Realities* (Abington, UK: Royal United Services Institute for Defence and Security Studies, 2016), 90.

⁵⁴ Kevin, Xie, “Crime Gone Wild,” *Harvard International Review*, August 27, 2015, accessed 11 May 2017, hir.harvard.edu/article/?a=11741.

⁵⁵ Christopher Jasparro, *Research Report Environmental Threats to Security, Stability, and U.S. Interests in Southern Africa: Opportunity Knocks: Time for a Comprehensive Region Defense Environmental International Cooperation and Environmental Security Assistance Strategy*, November 2011, for USAF Institute for National Strategic Studies/US Army Environmental Policy Institute.

⁵⁶ P. Gastrow, “Main Trends in the Development of South Africa’s Organized Crime,” *African Security Review* 8:6 (1999); STRATFOR, *Organized Crime in South Africa*, July 18, 2008, accessed September 29, 2009, http://www.stratfor.com/analysis/organized_crime_south_africa.

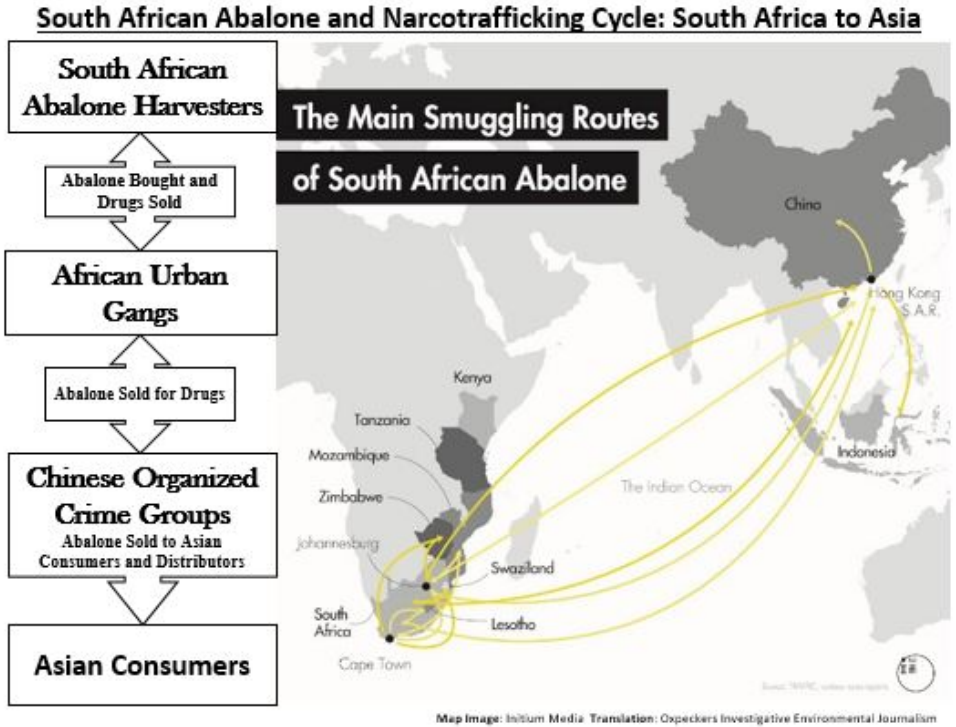


Figure 5. Abalone Trafficking (credits: Image: Initium Media; Translation: Oxepeckers Investigative Environmental Journalism)

Wildlife trafficking in southern Africa shares routes with drugs, weapons, and other contraband within the region as well as across the Indian Ocean and to and from Europe and South America.⁵⁷ Instances of wildlife and narcotics trafficking intersecting have been detected in numerous

⁵⁷STRATFOR, *Organized Crime in South Africa*, July 18, 2008, accessed September 29, 2009, http://www.stratfor.com/analysis/organized_crime_south_africa.

places, including Zambia.⁵⁸ In Botswana, intelligence sources developed for anti-poaching purposes have in turn yielded intelligence about other organized criminal activities,⁵⁹ while in northern Uganda ivory is just one commodity among a “portfolio of goods” that local smugglers and move across long-established trading networks.⁶⁰

While there is a general consensus about convergences between wildlife crime and other transnational crime,⁶¹ recent media attention and political rhetoric has tended to focus on linkages between wildlife crime, conflict, and terrorism. However, these linkages are more problematic and contested. “The argument that ivory plays a key role in financing terrorism has become embedded in public discourse in both Western and African states,” according to one author,⁶² yet globally most wildlife crime does not involve terrorists or insurgents. According to the UNODC, most elephant poaching in Africa occurs in countries at peace; if insurgents killed all the elephants in countries where they are active (encompassing about 4% of the continent’s elephant population), they would net only between \$10 million and \$40 million at current prices.⁶³

Although convergence between wildlife crime, conflict, and terror may not be globally extensive, it does occur and can be significant in

⁵⁸ Times of Zambia, “DEC Arrests Illegal Ivory Trader,” *Africa News*, March 17, 2008; S. Kimaro, “Woman Nabbed at Airport Trying to Smuggle Ivory Out to China,” *This Day*, July 13, 2009.

⁵⁹ Author field interviews: non-attribution interviews conducted by author with BDF and security officials in Gaborone, May 2005.

⁶⁰ Kristof Titeca, “Illegal Ivory Trade as Transnational Organized Crime? An Empirical Study into Ivory Traders in Uganda,” *British Journal of Criminology*, 2018, 11.

⁶¹ Cathy Haenlein and MLR Smith, *Poaching, Wildlife Trafficking, and Security in Africa: Myths and Realities* (Abington, UK: Royal United Services Institute for Defence and Security Studies, 2016), 77.

⁶² Rosaleen Duffy, “Al-Shabaab and Ivory (1),” Marjan Centre for the Study of War and the Non-Human Sphere, September 26, 2015, cited in Cathy Haenlein and MLR Smith, *Poaching, Wildlife Trafficking, and Security in Africa: Myths and Realities* (Abington, UK: Royal United Services Institute for Defence and Security Studies, 2016), 58.

⁶³ UNODC, *World Wildlife Crime Report: Trafficking in Protected Species* (New York: United Nations, 2016), 43-44.

particular locales. According to Interpol and the UN, several non-state armed groups are raising funds by targeting a diverse range of wildlife resources, including “ivory, rhinoceros horn, tiger pelts, [and] shatoosh wool from the Chiru or Tibetan antelope.”⁶⁴ Examples of such groups include the Lord’s Resistance Army (elephant poaching), Sudanese Janjaweed (elephant poaching), various Congolese militant groups (elephant, hippopotamus), Mozambican National Resistance (elephant, rhino), Bangladeshi separatists and allied Al-Qaeda affiliates (ivory, rhino horn, tiger pelts), and armed groups in northern Mali, including Al Qaeda in the Islamic Maghreb (elephants).⁶⁵ INTERPOL estimates that armed groups in sub-Saharan Africa obtain between \$4 million and \$12 million from ivory annually.⁶⁶

Generally, the convergence between wildlife crime and terrorism and insurgency is not one of simple financing but rather a dynamic in wider conflict, illicit, or gray-area economies. For instance, drug traffickers (including members of various armed groups) in Burma’s borderlands engage in timber, gem, and wildlife trafficking,⁶⁷ while local populations participate in illegal mining, logging, and wildlife trafficking.⁶⁸ These economies can link disparate armed groups, terrorists, and criminals across the geographic scale from the local level to international markets via transnational distribution networks. The existence of these markets can provide an economic disincentive for conflict resolution—in turn, helping to sustain ungoverned spaces. Conversely, allowing wildlife and other

⁶⁴ C. Nellemann, R. Henricksen, P. Raxter, N. Ash, and E. Mrema, E. (eds.), *The Environmental Crime Crisis: Threats to Sustainable Development from Illegal Exploitation and Trade in Wildlife and Forest Resources* (Nairobi: UNEP/GRID Arendal, 2014), 48.

⁶⁵ *Ibid.*, 48.

⁶⁶ *Ibid.*, 8.

⁶⁷ Vanda Felbab-Brown, *Enabling War and Peace: Logs, Gems, and Wildlife in Burma and Thailand* (Washington, DC: Brookings Institution, 2015), 20.

⁶⁸ *Ibid.*, 25.

forms of natural resource trafficking to perpetuate can be used to achieve initial buy-in to peace processes, although at the expense of longer-term political, economic, and environmental sustainability.⁶⁹

⁶⁹ C. Nellemann, R. Henricksen, P. Raxter, N. Ash, and E. Mrema, E. (eds.), *The Environmental Crime Crisis: Threats to Sustainable Development from Illegal Exploitation and Trade in Wildlife and Forest Resources* (Nairobi: UNEP/GRID Arendal, 2014), 48-49; Vanda Felbab-Brown, *Enabling War and Peace: Logs, Gems, and Wildlife in Burma and Thailand* (Washington, DC: Brookings Institution, 2015), 1-2.

V. Dynamics of Wildlife Crime

Most media coverage of wildlife crime focuses on poaching and the slaughter of iconic large mammal species, such as elephants and rhinos. However, the dynamics and conduct of wildlife crime are much broader, varied, and complex than commonly portrayed, and they must be understood in order to intelligently craft strategies and security cooperation efforts. There are two main levels of poaching and wildlife crime—subsistence and large-scale commercial—and they exist on a continuum, with varying grades and nuances between them.

A. Subsistence

Subsistence poaching primarily involves the hunting and trapping either of edible animal resources, better known as “bushmeat,” or animal products used for cultural or ceremonial practices, such as leopard skins for ceremonial dress in southern Africa or animal parts for making drums and medicine in Tanzania.⁷⁰ These products are either consumed directly by hunters, their families, and communities or sold for cash in local or regional markets. Although illegal subsistence hunting has attracted less media attention than large-scale commercial poaching, it is widespread. In the Central African Republic alone, 59,000 tons of bushmeat are illegally harvested each year; 2,078 tons of illegal bushmeat are confiscated annually in Tanzania. It is a key factor in shrinking wildlife populations, and is the primary driver of decline in some cases.

⁷⁰ P. Lindsey et al., *Illegal Hunting and the Bush-Meat Trade in Savannah Africa: Drivers, Impacts, and Solutions to Address the Problem* (New York: Panthrea/Zoological Society of London/Wildlife Conservation Society, 2012), 36.

The primary motive for subsistence poaching is basic survival—sustenance, cash, or barter. Poverty is the primary driver, especially in places where alternate sources of protein do not exist. In rural central Africa, for example, large-scale animal husbandry is not environmentally viable, but livestock is a traditional source of savings and insurance, and alternate lines of credit and saving are limited.⁷¹ Thirty percent to 80% of rural household protein thus comes from hunting.⁷² In central Africa cities, just 4% of protein comes from wild sources, but rapidly growing urban populations throughout the continent are driving an absolute increase in demand.⁷³ Similarly, in the Amazon basin, bushmeat is an important element of food security for rural households.⁷⁴

Bushmeat preferences generally result from a combination of ecological (what is available) and cultural (traditional food tastes, symbolic/cultural meaning, etc.) factors. Therefore, subsistence poaching targets a wide range of species. In Africa, this may include large mammals such as elephant, primates (gorilla, chimpanzees, monkeys), various antelope species, bush pigs, cane rats, bats, pangolin, crocodile, lizards, guinea fowl, and other bird species. Demand, however, can change in response to economic, demographic, and cultural trends. Overhunting and destruction of ecosystems that reduce populations of larger species such as antelope can lead to reliance on smaller species such as rodents.

⁷¹ Bushmeat Crisis Task Force, *Bushmeat: A Wildlife Crisis in West and Central Africa and Around the World* (Washington, DC: BCTF, 2009), accessed June 22, 2015, www.bushmeat.org/sites/default/files/BCTFBRIE.pdf.

⁷² P. Lindsey et al., *Illegal Hunting and the Bush-Meat Trade in Savannah Africa: Drivers, Impacts, and Solutions to Address the Problem* (New York: Panthrea/Zoological Society of London/Wildlife Conservation Society, 2012.), 14.

⁷³ Davide Wikie, Elizabeth Bennett, Heather Eaves, Michael Hutchins, and Christine Wolf, *Roots of the Bushmeat Crisis* (Silver Spring, MD: Association of Zoos and Aquariums, 2002), accessed June 22, 2015, www.bushmeat.org/sites/default/files/Nov2002BushmeatRootsofCrisis.pdf.

⁷⁴ Nathalie van Uliet et al., “Bushmeat Networks Link the Forest to Urban Areas in the Tri-Frontier Region Between Brazil, Colombia, and Peru,” *Ecology and Society*, 20:3 (2015), 20.

Infrastructure development and land use changes are increasing opportunities and incentives for bushmeat poaching. In the Congo Basin, road construction and the fragmentation of forests has made access easier for hunters and facilitated the transport of bushmeat to urban markets, while an influx of loggers, who have more money to spend than locals, has increased demand and consumption of bushmeat.⁷⁵ Increasing demand, profitability, and commercialization is now eroding cultural constraints and taboos on bushmeat hunting among some groups.

Bushmeat poaching is generally conducted with low-tech and inexpensive methods such as shotguns, muzzle loaders, bows and arrows, hunting dogs, and traps and snares. Trading and sale of bushmeat follows along informal and formal lines. For instance, subsistence hunters may provide meat directly to their families and fellow villagers or pass meat via informal social exchange networks to friends and family in urban areas.⁷⁶ Commercial hunters generally supply meat via middlemen and wholesalers to market stalls, restaurants, or specific customers. In some areas, hunters may be provided with weapons and ammunition by middlemen or wholesalers.⁷⁷ Hunting “rights” may be granted by village headmen or by corrupt government officials, who may also operate as brokers or middlemen.

⁷⁵ Bushmeat Crisis Task Force, *Bushmeat: A Wildlife Crisis in West and Central Africa and Around the World* (Washington, DC: BCTF, 2009), accessed June 22, 2015, www.bushmeat.org/sites/default/files/BCTFBRIE.pdf.

⁷⁶ Nathalie van.Uliet et al., “Bushmeat Networks Link the Forest to Urban Areas in the Tri-Frontier Region Between Brazil, Colombia, and Peru,” *Ecology and Society*, 20:3 (2015), 20; Bushmeat Crisis Task Force, *Bushmeat: A Wildlife Crisis in West and Central Africa and Around the World* (Washington, DC: BCTF, 2009), accessed June 22, 2015, www.bushmeat.org/sites/default/files/BCTFBRIE.pdf.

⁷⁷ Ibid.



Figure 6. Subsistence poaching snare, undisclosed location (photo credit: Chris Jasparro)

B. Commercial Wildlife Crime

At the other end of the wildlife crime spectrum—and of more concern to international security officials and military forces—is organized commercial poaching and trafficking involving transnational criminal networks and flows. This often involves military-style tactics and weaponry as well as traps, snares, and poison. Organized criminal wildlife trafficking

can penetrate and morph with small-scale poaching, particularly when bushmeat becomes a luxury or prestige item in urban areas or among diaspora communities overseas. Subsistence poachers can also be recruited by organized criminal syndicates as trackers, guides, and porters.

The conduct of organized commercial wildlife crime can vary depending on location and according to the commodities being poached and trafficked. Similarly, the level of organization and centralization varies, from highly organized syndicates to semi-organized, ad hoc, opportunistic, and shifting arrangements. For example, wildlife crime spiked in Mongolia after an economic crisis in the 1990s following the collapse of the Soviet Union, when many people were driven to engage in subsistence hunting and poaching. Poaching then took on a dual local/transnational structure, geared toward household consumption as well as profit. Trafficking of wildlife products initiated with local hunters and moved via middlemen who shipped contraband using small traders, particularly to China.⁷⁸

Generally, there are four common components to organized wildlife crime: poaching (i.e., supply); transit; facilitation (bribery, weapons procurement, coordination, documents, etc.); and sale (i.e. demand). It is important to remember that there is considerable diversity within each component.

i. Poaching

Commercial poaching may be opportunistic or commissioned. An example of opportunistic commercial poaching is when animals with commercially valuable parts such as ivory are killed for food or as pests, and high-value parts then are sold into commercial chains. The numbers and

⁷⁸ Christopher Jasparro, "Transnational Criminal Threats Encroach on Mongolia," *Jane's Intelligence Review*, August 21, 2006.

mix of personnel used in commercial poaching varies according to geography, species, and enforcement measures. Poaching may also be seasonal. For instance, the wet season is preferred in parts of Africa because bad roads restrict the mobility of anti-poaching forces. In other places, poachers prefer the dry season because animals are forced to congregate at watering spots.⁷⁹ In parts of South Africa, commercial bushmeat poaching increases ahead of holiday weekends to supply *braais* (barbeques).

Large mammal poaching usually involves teams of people with the following specific tasks and skills: trackers and guides, porters, cutters (those who butcher carcasses), shooters, and sometimes security elements. Poaching teams generally range from five to 20 people, depending on the area, the targeted species, and anticipated anti-poaching measures. Even poaching for smaller animals has the potential to escalate in terms of violence and weaponry. In Indonesia, organized criminal groups have penetrated tropical forests to hire locals to hunt hornbills,⁸⁰ reportedly with AK-47s loaned out by local police.⁸¹

According to wildlife officials, poaching teams in Kenya may consist of youths led by experienced poachers employing military-grade weapons such as AK-47s, M16s rifles, and G3 battle rifles.⁸² Rhino poaching teams in South Africa's Krueger National Park prefer large-caliber rifles such as .458s, .375s, .308s, and .303s with sound suppressors for taking down animals. The Czech C7-550 has emerged as a particular favorite, with security elements carrying AK-47s, R1s, and G3s for protection against

⁷⁹ Anita Grossman, "Tusks and Trinkets," *African Security Review* 18:4 (2010), 57.

⁸⁰ Rachel Bale, "These Rare Birds Are Being Slaughtered for Their Ivory," *National Geographic News*, March 16, 2016, accessed May 10, 2017, news.nationalgeographic.com/2016/03/160316-helmeted-hornbill-trafficking-smuggling-red-ivory/.

⁸¹ Doug Janson, "Spectacular Helmeted Hornbill Could be Wiped Out by Chinese Demand for 'Avian Ivory,'" *The Conversation*, November 16, 2015, accessed May 10, 2016, theconversation.com/spectacular-helmeted-hornbill-could-be-wiped-out-by-chinese-demand-for-avian-ivory-50349.

⁸² Anita Grossman, "Tusks and Trinkets," *African Security Review* 18:4 (2010), 57.

anti-poaching teams. Poachers are paid based on their function in the team. By mid-2014, water carriers could earn \$1,500 per kilogram of rhino horn obtained, with shooters earning up to \$5,000 per kilogram. Both South African and Mozambique nationals (some with dual citizenship) conduct the poaching. Tactics constantly evolve to evade anti-poaching teams. For instance, teams may enter the park legally as tourists with weapons hidden in specially designed vehicle compartments; when rhinos are spotted, the shooter may be dropped off, with teams returning later to pick up the kill.⁸³

Similarly, commissioned ivory poaching teams operating in the Kariba area of Zimbabwe prefer high caliber weapons such as .458s, .375s, and .303s for shooting animals and AK-47s or Chinese SKS rifles for security. Zambian poaching syndicates using local guides are the major players. In response to anti-poaching efforts, teams have become smaller. Previously as large as 15 or more, they now generally consist of a shooter, a guide and/or a tracker and two or three porters, along with the recent addition of a one-man security element. Some semi-opportunistic ivory poaching is conducted by locals with connections to middlemen who can fence the ivory and supply ammunition.

In Botswana, commercial poaching is generally conducted by cross-border groups employing locals as guides and porters, who have operated as far as 150 kilometers from the border. Six-man teams including one or two shooters have employed sophisticated and adaptable techniques such as tracking, weapons caching, establishing observation and listening posts, ambushing, creating operational deception, using light aircraft from remote strips, and separating sites, keeping camps, weapons, and kills separate.⁸⁴

⁸³ Julian Rademeyer, *Transnational Organised Crime and the "War" on Poaching* (Geneva, Switzerland: Global Initiative Against Transnational Crime, 2016), 11-13.

⁸⁴ Author field interviews: non-attribution interviews conducted by author with BDF and security officials in Gaborone, May 2005; author field interviews: non-attribution interviews conducted by author with BDF and security officials in Gaborone and Kasane, June 2009.

ii. Transit

Trafficking uses many pathways and markets with their own dynamics,⁸⁵ which makes generalization difficult, even within the market for a single species. While the following discussion and examples provide only a basic understanding of some major markets, they highlight the types of issues that should be considered in actual planning.

The transport of poached goods occurs along trafficking networks of varying sophistication and organization. Routes are fluid and adjust in response to enforcement efforts and changing transportation infrastructure, such as new road construction. For example, in eastern and southern Africa, there are both specialized organized networks as well as ad hoc shifting networks of local and transnational criminal gangs, middle men, and facilitators engaged in the ivory trade.

⁸⁵ UNODC, *World Wildlife Crime Report: Trafficking in Protected Species* (New York: United Nations, 2016), 10.

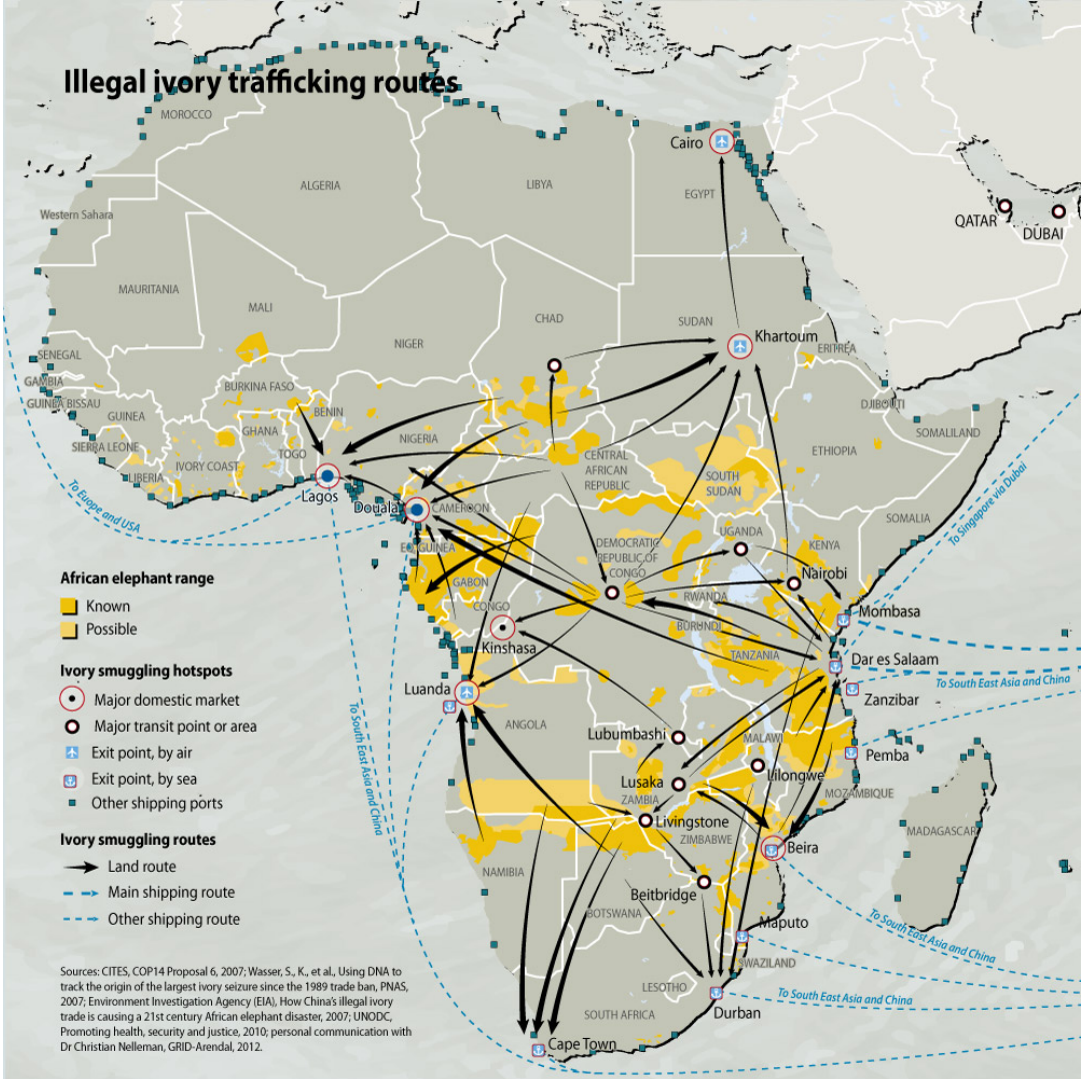


Figure 7. Ivory Trafficking (credit: Riccardo Pravettoni, GRID Arendal, <http://grid-arendal.herokuapp.com/resources/8027>)

East Africa is the gateway for maritime shipments to Asia, accounting for 70% of reported seizures between 2009-2013.⁸⁶ Ivory moves along routes used for both licit and illicit goods and is generally moved overland by road in vehicles ranging from large trucks to motorcycles,⁸⁷ sometimes via lakes such as Victoria with Malawi or Uganda as a staging point, and sometimes along the coast by *dhow* to east African ports such as Mombasa, Dar es Salaam, Zanzibar, and Pemba, and then on to Asia in shipping containers. It is often hidden among other products or in secret compartments.⁸⁸

A lesser volume moves overland to major airports and to Asia via commercial air. Another route sees ivory from Central Africa moving out via West African ports in countries such as Nigeria and Togo.⁸⁹ En route to destinations in Southeast and East Asia, ivory-bearing shipping containers often transit ports in the United Arab Emirates, Malaysia, and Vietnam.⁹⁰

iii. Facilitation

Commercialized wildlife crime involves much more than killing animals and transporting the booty. Considerable facilitation is needed to organize and connect suppliers with consumers and to ensure effective transport to destination markets. A diverse and fluid array of actors and arrangements are involved. Poaching teams must be contracted, armed, supplied, and connected to middlemen. Wildlife products must be

⁸⁶ Ibid., 44.

⁸⁷ Anita Grossman, "Tusks and Trinkets," *African Security Review* 18:4 (2010), 57.

⁸⁸ Ibid., 58.

⁸⁹ UNODC, *World Wildlife Crime Report: Trafficking in Protected Species* (New York: United Nations, 2016), 44.

⁹⁰ Ibid., 44.

transported within origin countries and then across borders, often via multiple transit modes, to distributors and sellers in market destinations.

Corruption, along with weak judicial systems, is often the lubricant on which the system flows. For example, half the wildlife cases in the Central African Republic's legal system are undercut by corruption, while three of the seven ivory traffickers arrested in Cameroon between July 2013 and August 2014 were released before completing their sentences, and only one of the seven received the minimum required penalty of at least a year in prison.⁹¹

Because most protected species and products can be traded legally to varying extents, permits obtained through fraud, corruption, and forgery often cover the movement of contraband.⁹² Bribes can facilitate movement through checkpoints, ports, and borders. In one case, a Chinese middleman paid \$20,000 in bribes to gain access to Dar es Salaam's port to deliver 81 tusks to Chinese naval officers whose vessel was in port. He was caught only because an underpaid supplier tipped off authorities.⁹³

Weapons may be surplus from past or nearby conflicts, loaned to poachers from facilitators, rented from local communities, or leaked or loaned from military forces. Ranger or military units sometimes conduct poaching and facilitate transport themselves. In South Africa, for instance, growing numbers of police, rangers, and park officials have been arrested for crimes related to rhino poaching and horn trafficking, with 11 policemen

⁹¹ Adam Welz, "The War on African Poaching: Is Militarization Fated to Fail?" *Yale Environment* 360, August 12, 2013, accessed September 25, 2016, 2013e360.yale.edu/feature/the_war_on_african_poaching_is_militarization_fated_to_fail/2679/.

⁹² UNODC, *World Wildlife Crime Report: Trafficking in Protected Species* (New York: United Nations, 2016).

⁹³ Environmental Investigation Agency, *Vanishing Point: Criminality, Corruption, and the Devastation of Tanzania's Elephants* (London, UK: EIA, 2014), 21.

arrested in 2015 alone.⁹⁴ Poachers also have attempted to infiltrate anti-poaching units.

The operations of the Xaysavang Network provide a mini-case study of how the four elements of the illegal wildlife trade come together and the difficulty of combating what is a murky and adaptive business. Turtles, tiger parts, pangolins, snakes, and ivory from Africa and Asia have been seized en route to companies registered to Lao national Vixay Keosavang, the network's alleged leader, who has been called the Pablo Escobar of wildlife trafficking. One tactic employed was the use of pseudo-hunters to apply for hunting permits in South Africa as a cover for rhino poaching. At one stage, Vietnamese nationals and female Thai prostitutes were used; the actual shooting was done by South Africans. Once this ruse was uncovered, Eastern European tourists were recruited instead.⁹⁵ Rhino horns were then shipped as "trophies" from South Africa to trans-shipment points in Laos and Thailand and on to markets in Vietnam and China.⁹⁶

Although this particular operation was broken up in 2012, the network is still believed to be active, and Keosavang is still at large despite a \$1 million reward for his arrest being posted by the U.S. government.⁹⁷ Information about the organization and its operations is cloudy and hard to ascertain. Network affiliates are currently suspected to be active in South

⁹⁴ Julian Rademeyer, *Transnational Organised Crime and the "War" on Poaching* (Geneva, Switzerland: Global Initiative Against Transnational Crime, 2016), 28.

⁹⁵ "Last Chance to See?," *The Economist*, April 16, 2016, accessed May 1, 2016, www.economist.com/news/international/21696961-first-two-articles-we-look-how-poachers-smugglers-and-lax-law-enforcement.

⁹⁶ Thomas Fuller, "In Trafficking of Wildlife, Out of Reach of Law," *New York Times*, March 3, 2013, accessed 10 May 2017, www.nytimes.com/2013/03/04/world/asia/notorious-figure-in-animal-smuggling-beyond-reach-in-laos.html.

⁹⁷ Associated Press. "To Fight Wildlife Crime, Follow the Money," September 17, 2017, accessed 2 April 2018, <https://www.news24.com/Green/News/to-fight-wildlife-crime-follow-the-money-20170917>.

Africa, Mozambique, Thailand, Laos, Malaysia, Vietnam, and China;⁹⁸ documents issued by the Laotian government are alleged to provide cover to some companies associated with the network.⁹⁹

⁹⁸ “Transnational Organized Crime Rewards Program: Xaysavang Network,” Bureau of International Narcotics and Law Enforcement Affairs, accessed 1 May 2017, <http://www.state.gov/j/inl/tocrewards/c60273.htm>.

⁹⁹ Thomas Fuller, “In Trafficking of Wildlife, Out of Reach of Law,” *New York Times*, March 3, 2013, accessed 10 May 2017, www.nytimes.com/2013/03/04/world/asia/notorious-figure-in-animal-smuggling-beyond-reach-in-laos.html.

VI. Unique Aspects and Challenges Posed by Wildlife Crime

The four components around which wildlife crime are arranged—poaching, transit, facilitation, and sale—parallel most types of transnational criminal trafficking and provide the basis for convergence with other types of criminal and security threats. However, these similarities can make it easy to overlook a number of challenges that are either particular to wildlife crime or that have distinctive dimensions when they occur in the context of wildlife crime, and thus must be taken into consideration when designing and executing AP/CWT and supporting programs.

A. Wildlife Crime Is About People, Not Just Animals

Although community support and buy-in has proven to be a force multiplier and critical element in achieving sustainable and effective anti-poaching in many venues,¹⁰⁰ the fact that wildlife crime is ultimately about humans is often overlooked. Sensationalized international media coverage and the advocacy campaigns of some NGOs focus on the plight of “helpless” animals, ignoring the human aspect. Such animal-centric views can contribute to several interrelated challenges.

First, animal-centric perspectives, especially where species face rapid decline, can lead to an imbalance towards supply-side (i.e., enforcement at

¹⁰⁰ Elizabeth Lunstrum, “Reconstructing History, Grounding Claims to Space: History, Memory, and Displacement in the Great Limpopo Transfrontier Park,” *South African Geographical Journal* 92:2 (December 2010), 129; Game Rangers Association of Africa, *Media Statement: The Use of Military and Security Personnel and Tactics in the Training of African Rangers*, April 4, 2017, accessed 10 May 2017, www.gameranger.org/news-views/media-releases.html?utm_content=buffer8c209&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer; ADF Staff, “Poaching Threatens Africa’s Wildlife Treasures,” *Africa Defense Forum* 9 (3rd Quarter 2016), 45-49.

the source) approaches. This can lead to dehumanization of poachers and local communities as “bad” people killing “helpless” animals and intensify the negative effects of militarization and threat conflation (which will be discussed later). Without addressing governance problems and consumer demand in wealthier countries, anti-poaching enforcement becomes “a game of whack-a-mole”¹⁰¹—where one problem is solved, another pops up. It must be recognized that although supply-side and militarized approaches may be necessary in some cases, they are not solutions. Retired South African general Johan Jooste, who was appointed by South Africa National Parks to devise an anti-poaching strategy explains, “We are forced into [militarization] to buy time . . . [but] the high demand for rhino horn cannot be defeated by force.”¹⁰²

Second, focusing on wildlife protection without equal consideration to local communities can create or exacerbate a negative triangular dynamic between land use/tenure disputes, human-wildlife conflict (HWC), and displacement of human communities. HWC may occur when animal populations increase due to the intended or unintended effects of successful wildlife protection methods or when the ability of local communities to manage the effects of wildlife populations on their livelihoods changes. This might be because of state-imposed regulations on how local communities interact with wildlife, thereby exposing them to challenges such as loss of crops or livestock. For instance, farmers and herders trying to protect their livelihoods in some parts of Kenya injure and kill more

¹⁰¹ Peter Knight, quoted in Adam Welz, “The War on African Poaching: Is Militarization Fated to Fail?” *Yale Environment* 360, August 12, 2013, accessed September 25, 2016, 2013e360.yale.edu/feature/the_war_on_african_poaching_is_militarization_fated_to_fail/2679/.

¹⁰² Julian Rademeyer, *Transnational Organised Crime and the “War” on Poaching* (Geneva, Switzerland: Global Initiative Against Transnational Crime, 2016), 19.

animals per year than poachers do.¹⁰³ Animals are also killed in retaliation for killing livestock or people. For example, in Kenya's Amboseli National Park, the rate of ivory poaching has declined, while retaliatory killings have increased since 2011.¹⁰⁴

Land-use disputes arise when the goals of conservation, wildlife tourism, and agriculture conflict, especially when they result in disputes over land tenure, ownership, or user rights. Land-use issues and HWC can also lead to displacement of local populations. Conservation displacement has two main causes: socioeconomic, when adverse effects on peoples' livelihoods prompt voluntary movement; and physical, or the removal of communities from protected areas.¹⁰⁵ Exclusion of local communities, displacement of local communities, or failure to adequately address the needs of local communities can undermine the legitimacy of host governments and external partners. Further, because contemporary conservation areas in many parts of the world are based either in old royal hunting preserves or colonial-era conservation plans, these issues can provide fodder to information and ideological campaigns waged by non-state adversaries by reviving or reinforcing anti-colonial, anti-state narratives.

Colonial conservation grew out of romantic traditions opposed to modernization and a rational scientific approach that aimed to "manage nature for human enjoyment and health."¹⁰⁶ Much contemporary

¹⁰³ Amy Yee, "The Other Reason Africa's Elephants Are Dying," *Foreign Policy*, May 9, 2016, accessed May 12, 2016, <http://foreignpolicy.com/2016/05/09/the-real-reason-africas-elephants-are-dying>

¹⁰⁴ Ibid.

¹⁰⁵ Francis Masse, "The Political-Ecology of Human-Wildlife Conflict: Producing Wilderness, Insecurity, and Displacement in the Limpopo National Park," *Conservation and Society* 14:2, 2016, 100-111.

¹⁰⁶ W. Adams and M. Mulligan (eds.), *Decolonizing Nature: Strategies for Conservation in a Postcolonial Era* (London: Earthscan, 2003), quoted in James Murombedzi, *Pre-Colonial and*

conservation thinking and media/policy attention on combating wildlife crime is subconsciously derived from this colonial approach, which can lead to an ahistorical view of the problem by external actors and states. It is important to remember that hunting by European colonialists played a role in the advancement of imperialism. The subsequent enactment of colonial game laws and reserves were based on the desire for security rights and resources for colonial elites and the state, as well as on the Western scientific and cultural desire to protect species for posterity.¹⁰⁷ This was usually done without regard for and to the exclusion of local communities.

Not surprisingly, local communities often have different historical memories that can trigger and be used to foster resistance to anti-poaching and conservation measures. The creation of the Great Limpopo Transfrontier Park, straddling the borders of South Africa, Zimbabwe, and Mozambique, was justified by state actors on the basis of wildlife conservation, tourism, and addressing past conflicts; however, local residents slated for relocation question the project's legitimacy due to memories of past displacements.¹⁰⁸ Similarly, tensions are growing in parts of Kenya between local herders under stress from drought, population growth, land shortages, and other factors and large ranches and wildlife conservancies owned by people of European descent. These tensions are being (re)framed by some through the lens of old anti-colonial narratives, in which land was seen as being stolen from locals and given to white farmers.¹⁰⁹ In Nepal, the "commodification" and protection of wildlife for

Colonial Practices in Southern Africa and Their Legacy Today, 2003, accessed May 12, 2017, cmsdata.iucn.org/downloads/cca-jmurombedzi, 5.

¹⁰⁷ James Murombedzi, *Pre-Colonial and Colonial Practices in Southern Africa and Their Legacy Today*, 2003, accessed May 12, 2017, cmsdata.iucn.org/downloads/cca-jmurombedzi, 6-7.

¹⁰⁸ Elizabeth Lunstrum, "Reconstructing History, Grounding Claims to Space: History, Memory, and Displacement in the Great Limpopo Transfrontier Park," *South African Geographical Journal* 92:2 (December 2010), 129.

¹⁰⁹ Jeffrey Gettleman, "Disappearance of Fertile Land Fuels 'Looming Crisis' in Africa," *New York Times*, July, 30, 2017, P. 11.

ecotourism became a symbol of “outside domination,” which in turn generated sympathy for Maoist insurgents.¹¹⁰

Community-security force tension is common enough that more Asian and African wildlife rangers report life-threatening encounters with local communities than with poachers.¹¹¹ Consequently, care must be taken that military support to conservation and wildlife protection does not play into narratives that can undermine community support or host-government legitimacy, potentially bolstering information operations conducted by insurgents and extremists.

B. Poachers, Traffickers, *and* Animals Move: Balloon and Reverse Balloon Effects

The war on poaching can produce “balloon effects” in which suppression and interdiction in one place can displace poaching and trafficking somewhere else. For example, the rhino poaching outbreak in South Africa as of this writing (spring 2018) is partly the result of efforts to protect rhinos in Zimbabwe by moving them to protected zones in South Africa. Similarly, ivory traffickers try to avoid interdiction by shifting shipments through places with weak port and airport controls such as Togo

¹¹⁰ L.R. Douglas and K. Alie, “High-Value Natural Resources: Linking Wildlife Conservation to International Conflict, Insecurity, and Development Concerns,” *Biological Conservation* 171 (2014), 274.

¹¹¹ WWF, *Ranger Perceptions Africa* (Washington, DC: WWF, 2016), accessed July 21, 2017, https://c402277.ssl.cf1.rackcdn.com/publications/880/files/original/Ranger_Perception_Africa_%28FINAL%29.pdf?1464013250; WWF, *Ranger Perceptions Asia* (Washington, DC: WWF, 2016), accessed July 21, 2017, https://c402277.ssl.cf1.rackcdn.com/publications/861/files/original/Ranger_Perception_Survey_%28Asia%29.pdf?1456408489.

and Mozambique in order to avoid enhanced security in places like Dar es Salaam.¹¹²

Unlike with drug production or trafficking in fixed natural resources such as timber and minerals, wildlife trafficking does not involve an inanimate commodity but one that is both sentient and mobile. This can lead to a kind of “reverse balloon effect,” whereby successful protection efforts in one locale can result in animals moving to “safe” areas, which in turn can either lead to species overpopulation, environmental degradation, and new or intensified HWC—and in turn undermine support for even broadly popular wildlife protection efforts. For example, Botswanan anti-poaching efforts have gained accolades, garnered considerable public respect, and enhanced the reputation of the Botswana Defence Force.¹¹³ However, rebounding elephant populations in Botswana have precipitated an increase in HWC and somewhat weakened public support for anti-poaching measures.¹¹⁴ (Unfortunately, animals do not always appreciate the fact that they are being protected, either. Rangers surveyed in Africa and Asia report more life-threatening encounters with wildlife than with people.¹¹⁵)

¹¹² Adam Welz, “The War on African Poaching: Is Militarization Fated to Fail?” *Yale Environment* 360, August 12, 2013, accessed September 25, 2016,

2013e360.yale.edu/feature/the_war_on_african_poaching_is_militarization_fated_to_fail/2679/.

¹¹³ Author field interviews: non-attribution interviews conducted by author with BDF and security officials in Gaborone, May 2005; author field interviews: non-attribution interviews conducted by author with BDF and security officials in Gaborone and Kasane, June 2009; Dan Henk, “Biodiversity and the Military in Botswana,” *Armed Forces & Society* 32:2 (2006), 273-291.

¹¹⁴ Christopher Jasparro, *Research Report Environmental Threats to Security, Stability, and U.S. Interests in Southern Africa: Opportunity Knocks – Time for a Comprehensive Regional Defense Environmental International Cooperation and Environmental Security Assistance Strategy*, November 2011, for USAF Institute for National Strategic Studies/US Army Environmental Policy Institute.

¹¹⁵ WWF, *Ranger Perceptions Africa* (Washington, DC: WWF, 2016), accessed July 21, 2017, https://c402277.ssl.cf1.rackcdn.com/publications/880/files/original/Ranger_Perception_Africa_%28FINAL%29.pdf?1464013250; WWF, *Ranger Perceptions Asia* (Washington, DC: WWF, 2016), accessed July 21, 2017, https://c402277.ssl.cf1.rackcdn.com/publications/861/files/original/Ranger_Perception_Survey_%28Asia%29.pdf?1456408489.



Figure 8. Chobe River without elephants, Namibia (photo credit: Chris Jasparro)



Figure 9. Chobe River elephant herd, Botswana (photo credit: Chris Jasparro)

C. Militarization

As discussed earlier, the pace and violence of wildlife crime in relation to the limited capabilities and capacity of many traditional wildlife enforcement agencies has driven demand for and in many cases necessitated military or military-like responses and capabilities. Militarized responses include employment of military forces and/or tactics in anti-poaching; providing traditional ranger and law enforcement units with military training and equipment; and involvement of private military corporations and former military personnel in supporting and training anti-poaching forces and conservation NGOs. Such responses have had mixed effects. While in some instances these measures have “resulted in high numbers of arrests and seizures of ivory, weapons, and ammunition, in some cases civilians have faced increased threats from firearms and violence related to anti-poaching activity.”¹¹⁶ Both practitioners and researchers have cautioned against the pitfalls of applying over-militarized approaches to anti-poaching and CWT.¹¹⁷ However, most of these critiques have been limited to issues of weapons and tactics and certain technologies rather than non-kinetic and non-high-cost assistance that military forces can provide

¹¹⁶ Christopher Carlson, Joanna Wright, and Hannah Dönges, *In the Line of Fire: Elephant and Rhino Poaching in Africa* (Small Arms Survey, 2015), accessed April 2, 2018, <http://www.smallarmssurvey.org/fileadmin/docs/A-Yearbook/2015/eng/Small-Arms-Survey-2015-Chapter-01-EN.pdf>

¹¹⁷ Game Rangers Association of Africa, *Media Statement: The Use of Military and Security Personnel and Tactics in the Training of African Rangers*, April 4, 2017, accessed 10 May 2017, www.gameranger.org/news-views/media-releases.html?utm_content=buffer8c209&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer; Rosaleen Duffy, “War, by Conservation,” *Geoforum* 69 (2016), 238-248; Elizabeth Lunstrum, “Green Militarization: Anti-Poaching Efforts and the Spatial Contours of Kruger National Park,” *Annals of the Association of American Geographers* 104:4 (2014), 816-832; Adam Welz, “The War on African Poaching: Is Militarization Fated to Fail?” *Yale Environment* 360, August 12, 2013, accessed September 25, 2016, 2013e360.yale.edu/feature/the_war_on_african_poaching_is_militarization_fated_to_fail/2679/.

such as first aid training, human rights education, planning and strategy development, and so forth.

According to the Game Rangers Association of Africa,¹¹⁸ some areas of concern around the involvement of foreign military personnel training wildlife personnel and rangers include the following:

- Differences between military and ranger/law enforcement cultures;
- Lack of appreciation for the operating environment and specialist anti-poaching skills that require detailed knowledge of ecosystems, wildlife behavior, and local communities and cultures;
- Inappropriate assistance relative to the threat or legal frameworks: legal restrictions and use-of-force principles often differ considerably from wartime rules of engagement, while in some cases park rangers have been trained in tactics such as long-ranger sniper training that would result in their arrest if employed;
- Provision of technology and equipment that is too expensive, high-tech, or difficult to maintain in situations where basic equipment such as boots, first aid kits, and uniforms are lacking.

Integrating technology such as drones into AP operations has been successful in some cases. However, many countries affected by poaching have environmental constraints such as dense forest cover, dust, or sand that make drones impractical. Further, the capabilities required for effective drone operations, such as thermal imaging and sophisticated processing and analytical software, and the cost of expertise and infrastructure required to support these capabilities (as much as \$500,000 per year) are often

¹¹⁸ Game Rangers Association of Africa, *Media Statement: The Use of Military and Security Personnel and Tactics in the Training of Africas Rangers*, April 4, 2017, accessed 10 May 2017, www.gameranger.org/news-views/media-releases.html?utm_content=buffer8c209&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

prohibitive, especially when ground-response forces may lack basic supplies like canteens and boots.¹¹⁹

Militarized approaches may increase the risk of collateral damage. And collateral damage combined with heavy-handed approaches can damage the community relations that are so important for anti-poaching, challenge the rule of law, and undermine government legitimacy. Shootings of poachers in Krueger National Park have strained relations between local communities, rangers, and the government to the point where people start saying about park rangers, “You are a killer, you’re killing our children out there, you’re killing our husbands . . .”¹²⁰ Mozambicans killed by anti-poaching forces often receive a hero’s burial and have stories and songs written about their exploits, while members of some South African and Mozambican border communities question whether the lives of animals are more valuable than those of citizens.¹²¹

When applied against subsistence hunting, which is closely tied to people’s basic livelihood and cultural traditions, overly militarized approaches may increase or exacerbate security problems and even increase illegal hunting. This is especially the case in areas where local populations have few alternatives to subsistence hunting, where they are marginalized from the benefits of wildlife protection, and where governments have limited legitimacy.

Militarized approaches may also reinforce an overreliance on supply-side enforcement at the expense of broader measures, which can be

¹¹⁹ Patricia Raxter and Rory Young, “Drones Can Curb Poaching, but They’re Much Costlier Than Alternatives,” National Geographic Changing Planet (blog), May 23, 2015, accessed April 4, 2018, <https://blog.nationalgeographic.org/2015/05/23/drones-can-curb-poaching-but-theyre-much-costlier-than-alternatives/>.

¹²⁰ Elizabeth Lunstrum, “Green Militarization: Anti Poaching Efforts and the Spatial Contours of Kruger National Park,” *Annals of the Association of American Geographers*, 104:4 (2014), 829.

¹²¹ Julian Rademeyer, *Transnational Organised Crime and the “War” on Poaching* (Geneva, Switzerland: Global Initiative Against Transnational Crime, 2016), 16.

compounded by militarization's media appeal. According to some conservationists, this can lead to a bias toward resourcing enforcement because politicians, donors, and the public see images of anti-poaching operations and equipment as "sexy," while donors "like to see boots on the ground and technology."¹²²

Assigning military units to anti-poaching operations may shift assisting or partner national forces from more traditional military roles such as counterterrorism, counterinsurgency, peacekeeping, disarmament demobilization and reintegration, or security sector reform. It may detract from other strategic priorities of the assisting and/or partner nations or divert forces away from targeting the roots of poaching in a particular area, such as fighting rebels or performing post-conflict stability operations, to targeting its symptoms. In cases where armed groups involved in a conflict are poaching, focusing limited resources on defeating the armed groups or ending the conflict may be a better path than focusing on anti-poaching.

Boosting the capability of military forces to combat poaching may deprive ranger and law enforcement forces of much-needed resources or exacerbate imbalances between military and civilian security forces. For instance, one unintended consequence of the effectiveness of the Botswana Defence Force in containing poaching in the early 2000s was to erode incentives for improving the capabilities of Botswana's police and wildlife departments.¹²³

A final dimension of militarization is the increasing involvement of non-state military actors into anti-poaching/CWT as local private military corporations, foreign military veterans, and NGOs take on military/security

¹²² Adam Welz, "The War on African Poaching: Is Militarization Fated to Fail?" *Yale Environment 360*, August 12, 2013, accessed September 25, 2016, 2013e360.yale.edu/feature/the_war_on_african_poaching_is_militarization_fated_to_fail/2679/.

¹²³ Dan Henk, "Biodiversity and the Military in Botswana," *Armed Forces & Society* 32:2 (2006), 285.

functions. With most conflicts and disasters, NGOs may seek support from and/or to coordinate with military forces but maintain their neutrality and independence, while private military corporations tend to operate as specifically military auxiliaries. However, in the anti-poaching arena, many NGOs are developing their own military capabilities and even conducting their own intelligence, security assistance, and field operations. NGOs directly recruit and employ former military and intelligence personnel and work with military contractors and suppliers; and some foreign military veterans have set up their own anti-poaching NGOs or consultancies.¹²⁴

The quality and competence of these organizations and individuals are highly uneven. Some are highly skilled and understand the nature of the threat and operating environments, but others are “fly-by-night trainers cashing in on the poaching crisis,” according to the Game Rangers Association of Africa, often abetted by media that “portrays military ‘heroes’ as the answer” to poaching, with sensational headlines such as “Iraq War Veteran Battles Rhino Poachers in Africa.”¹²⁵ This can lead to fraught relations with host-nation governments and wildlife organizations; one group called Veterans Empowered to Protect African Wildlife was

¹²⁴ Rosaleen Duffy, Hannah Dickinson, and Laure Joanny, “Foreign ‘Conservation Armies’ in Africa May Be Doing More Harm Than Good,” *The Conversation*, July 12, 2017, accessed April 5, 2018, <http://theconversation.com/foreign-conservation-armies-in-africa-may-be-doing-more-harm-than-good-80719>; Joshua Hammer, “The Fight Against Elephant Poachers Is Going Commando,” *Smithsonian Magazine*, June 2016, accessed April 5, 2018, <https://www.smithsonianmag.com/science-nature/fight-against-elephant-poaching-going-commando-180959071/#doR1WRYeqBtiERh.99>; Alison Morrow and Susan Wyatt, “Anti-Poaching Battlefield Draws U.S. Veterans,” *Military Times*, September 27, 2015, <http://www.militarytimes.com/story/veterans/2015/09/07/anti-poaching-battlefield-draws-us-veterans/72673584/>, accessed September 28, 2015.

¹²⁵ Game Rangers Association of Africa, *Media Statement: The Use of Military and Security Personnel and Tactics in the Training of African Rangers*, April 4, 2017, accessed 10 May 2017, www.gameranger.org/news-views/media-releases.html?utm_content=buffer8c209&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer; Darren Taylor, “Iraq War Veteran Battles Rhino Poachers in Africa,” VOANEWS, January 29, 2012, m.voanews.com/a/Iraq-war-veteran-battles-rhino-poachers-in-africa-138338229/159563.html.

ousted from Tanzania in 2015 after its inflammatory language about killing poachers came to light.¹²⁶

D. Threat Conflation

It is clear that the practice of poaching has become militarized in many cases and that wildlife crime often converges or intersects with other transnational and irregular security threats. However, there is danger in overly conflating these connections in counterproductive ways that accelerate militarized responses and negative side effects. Threat conflation is fueling a “poachers-as-terrorists” narrative¹²⁷ that glosses over the differences between types of poachers and can allow poachers to be viewed as legitimate targets of war, “making their deaths not only permissible but necessary to save threatened wildlife.”¹²⁸

In most cases, wildlife crime is not or is only marginally related to terrorist and conflict funding. Although there may be merit in pursuing AP/CWT in support of a broader CT or COIN campaign in certain areas, attacking wildlife crime through a primarily CT/COIN lens would in most cases represent a misunderstanding of the problem and lead to ineffective if not counterproductive results. This misfire would extend beyond combating wildlife crime and encompass broader strategic objectives such as establishing good governance and countering radical ideologies. As discussed above, application of excessive force, heavy-handedness, and exacerbating human-wildlife and land tenure conflicts can erode the legitimacy of host-nation governments and forces while reinforcing anti-

¹²⁶ Jon Anderson, “Nonprofit VETPAW Kicked Out of Tanzania,” *Military Times*, May 7, 2015, www.militarytimes.com/story/veterans/2015/05/07/reports-nonprofit-vetpaw-kicked-out-of-tanzania/70963970/

¹²⁷ Rosaleen Duffy, “War, by Conservation,” *Geoforum* 69 (2016), 240.

¹²⁸ *Ibid.*, 243.

Western neocolonial narratives and detracting from the effectiveness of core CT/COIN and post-conflict stability operations.

Furthermore, viewing hunters and poachers strictly as criminals, insurgents, or terrorists who should be deterred or neutralized may negate other opportunities. Many poachers have been “flipped” to become effective anti-poaching rangers, trackers, and informants.¹²⁹ Participatory or community-based anti-poaching approaches have also demonstrated potential if properly conceived.¹³⁰

Hunters have also played important roles as community protection forces or as COIN auxiliaries. For instance, in northern Nigeria, local hunters have turned against Boko Haram;¹³¹ and in the late 1990s, traditional Kamajor hunters in Sierra Leone played an important role in defending local communities and defeating Revolutionary United Front rebels. Today former Kamajor fighters (some who are also former poachers) serve as anti-poaching rangers in Sierra Leone.¹³²

Conversely, disputes between governments and indigenous peoples can potentially alienate useful allies for anti-poaching or even create tensions within governments. In Botswana, for example, wildlife and police officials have been accused of abusing San hunters and gatherers,¹³³ while the

¹²⁹ For examples see Delia and Mark Owens, *The Eye of the Elephant* (Boston: Houghton Mifflin Company, 1992); Remy Scalza, “Preserving Culture, Protecting Wildlife,” *New York Times*, November 3, 2013, 8 tr; B.J. Kelso, “Hunting for Conservation,” *Africa Report* 38:4 (1993), 68-71.

¹³⁰ For a discussion of the prospects and pitfalls of community-based anti-poaching, see Frances Masse, Alan Gardiner, Rodgers Lubilo, and Martha Ntlhaele Themba, “Inclusive Anti-Poaching,” *SA Crime Quarterly*, June 2017, 19-27.

¹³¹ Dionne Searcy, “Hunters Now Track Militants’ Prey in Nigeria: Boko Haram,” *New York Times*, May 14, 2017, 6.

¹³² Aurele Marrier d’Unienville, “Sierra Leone’s Ex-Civil War Fighters Battle Poachers,” Al Jazeera, April 10, 2016, accessed May 12, 2017, www.aljazeera.com/indepth/features/2016/03/sierra-leone-civil-war-fighters-battling-poachers-16032115725113.html.

¹³³ Sandy Gall, *The Bushmen of Southern Africa* (London: Pimlico, 2002).

Botswana Defence Force, which was not implicated in the San controversy, has effectively used San trackers to support its anti-poaching operations.¹³⁴

¹³⁴ Christopher Jasparro, *Research Report Environmental Threats to Security, Stability, and U.S. Interests in Southern Africa: Opportunity Knocks – Time for a Comprehensive Region Defense Environmental International Cooperation and Environmental Security Assistance Strategy*, November 2011, for USAF Institute for National Strategic Studies/US Army Environmental Policy Institute, 12.

VII. Areas for Security Cooperation and Military Assistance

A Land Rover on a game drive bounces along a rutted road towards the banks of the Chobe River in northern Botswana, when a truck carrying a squad of armed soldiers suddenly appears from around a bend. In many parts of Africa, coming across armed men in the remote bush would be a cause for alarm, but these are professional soldiers of the Botswana Defence Force returning from an anti-poaching patrol. The encounter passes with friendly waves and smiles.

A few kilometers down the road, the Land Rover comes across several large elephant herds. Across the river and international border lies the Caprivi Strip, where elephants enjoy less effective protection and only a single elephant roams.

The BDF's anti-poaching mission began in 1987 in response to a rise in commercial poaching related to conflicts in neighboring countries, as wildlife personnel were unable to cope with the increased rate of poaching and militarized opponents. In the early 1990s, the U.S. Defense Department provided boats and light aircraft to the BDF, and U.S. Special Forces provided training to BDF commandos. USAID provided long-term assistance with implementing a community-based natural resource management program.

While the experience of Botswana suggests that military assistance and security cooperation in support of anti-poaching can be effective and provides lessons worth studying, it is important to recognize that this is a rare success story. The military piece is just one part in a unique institutional-political-legal-geographic-cultural-

developmental context. However, its approach was born in the last wave of poaching, and the new wave that is sweeping across Africa is encroaching upon Botswana, which will necessitate changes in strategy if it is to be combatted effectively. HWC conflict, treatment of the indigenous San people, and political rivalries between the national intelligence service, BDF senior officers, and the Department of Wildlife's intelligence sections are ongoing controversies that must be addressed.

Given the complex challenge wildlife crime presents and the potential pitfalls it poses, what can be done to determine which assistance might be the most appropriate and effective?

The first step is to determine what kind of security cooperation and military assistance should be provided—if any at all. The complexity and variability of wildlife crime and the diversity of potential partner nation contexts, forces, and capabilities precludes the development of a uniform template or standard suite of approaches that can be devised.

A tailored approach is required. This must involve an initial recognition that wildlife crime is a complex phenomenon. Reductionist narratives and logic chains such as “poacher equals bad” and “animal equals good” must be eschewed, as must threats conflated without nuance or context such as “poaching funds terrorism, so poachers are terrorists; therefore, poaching is a CT problem.”

An in-depth assessment should include an analysis of the strategic and operational environment, which includes ecosystems, wildlife, local culture, key stakeholders and actors, the political and legal environment, and the partner nation needs versus strategic and program objectives and potential risks. Specific consideration should be given to questions such as the following:

1. What type of wildlife crime is being targeted, and what is the wider context in which it is embedded?
2. What are the overarching strategic and operational objectives of assisting and host nations for CWT (i.e., protecting animals, countering other threats via CWT, etc.)?
3. Are integrated CWT strategies or approaches already in place by countries providing and receiving assistance that additional efforts can support?
4. Who are the key stakeholders and participants (communities, agencies, NGOs, businesses, contractors, etc.) involved in CWT? Are any key members being left out? What is the level of community involvement?
5. What forms of corruption could threaten the efficacy and/or the operational security of the cooperation effort? Can safeguards be put in place?¹³⁵
6. What are the partner nation's existing capabilities and needs, especially those specific to anti-poaching? Is the proposed assistance appropriate for the partner nation in terms of cost, sustainability, and level of technology?
7. What is the legal milieu for CWT in the partner nation (i.e., relevant laws, authorities for use of force, rules of engagement)?
8. Who will (and should) be the recipients of assistance? What types of organizational culture must be considered (i.e., ranger, military, etc.)?

¹³⁵ For a comprehensive approach to countering wildlife related corruption, see WWF and TRAFFIC Wildlife Crime Initiative, *Strategies for Fighting Corruption in Wildlife Conservation: A Primer*, http://www.traffic.org/general-reports/wci_strategies_for_fighting_corruption_wildlife_conservation.pdf

9. Is the assistance appropriate for the legal milieu (laws, security force authorities, rules of engagement)?
10. What are the risks of unintended consequences and blowback at local, national, regional, and strategic levels? What are the risks of over-militarization and escalation? What are the risks of CWT efforts working at cross-purposes to other priorities and actions?

Once a decision has been made to provide assistance, numerous avenues can be pursued, depending upon the particular situation. Although varying partner-nation needs and the unique contexts of wildlife crime prevent uniform and formulaic approaches, best practices from the field suggest that assistance with strategy development and intelligence-led operations, fusion, and analysis should be considered in most cases. Experience has shown that the correct strategy is crucial to success.¹³⁶ However, many park, reserve, and country-level AP/CWT efforts are fragmented, tactically focused, and reactive. The expertise of the U.S. and other Western military in designing strategic planning processes and developing comprehensive strategies (and the subsequent doctrine and capability assessments) could be applied to combating wildlife trafficking and related threats.

Multisource intelligence-led operations have also been shown to be highly effective in CWT.¹³⁷ The experience gained by the U.S. and other

¹³⁶ Wayne Lotter and Krissie Clark, "Community Involvement and Joint Operations Aid Effective Anti-Poaching in Tanzania," *Parks*, March 2014, 24.

¹³⁷ Lindy Taverner and Peter Scott, "Wildlife Protection: The Emergence of Intelligence-Led Policing," *Africa Geographic* (blog), March 3, 2017, accessed April 3, 2018, <https://africageographic.com/blog/wildlife-protection-emergence-intelligence-led-policing/>; *Elephant Crisis Fund Special Report 2017*, accessed April 2, 2018, https://wildnet.org/sites/default/files/ECF%202017%20Special%20Report_final.pdf; Patricia Raxter and Rory Young, "Drones Can Curb Poaching, but They're Much Costlier Than Alternatives," *National Geographic Changing Planet* (blog), May 23, 2015, accessed April 4, 2018, <https://blog.nationalgeographic.org/2015/05/23/drones-can-curb-poaching-but-theyre-much->

Western militaries in the application of intelligence-led approaches to combat irregular, transnational, and networked opponents over the past several decades are particularly relevant to AP/CWT. Especially valuable are collection of information derived from combat tracking, sensitive site exploitation and crime-scene processing at the tactical level, and its fusion with operational and strategic-level intelligence. Assistance with combat tracking, site exploitation, and crime-scene investigation along with intelligence fusion, analysis, dissemination, and sharing could help improve the efficiency and effectiveness of tactical operations, develop a better intelligence picture of operating environments, expose criminal networks and corruption, and (where convergence does occur) provide insight into the operations and networks of other transnational criminal and armed groups.

Militaries could offer numerous other forms of assistance if the situation warrants. At the tactical level, there is often a need for training and assistance in basic weapons skills and care, tactical shooting, movement and counterambush techniques against militarized opponents, detecting and countering IEDs, first aid, casualty evacuation, patrol planning, land navigation and map reading, exploiting and processing sites for evidence and intelligence, hotspot mapping, and meteorological observation and recording. Material needs often include uniforms, boots, canteens, packs, vehicles, radios, sleeping bags, tents, and basic infrastructure such as base camps and housing.

At the operational and strategic levels, common needs include assistance and advice in the areas of weather forecasting and reporting;

costlier-than-alternatives/; Wayne Lotter and Krissie Clark, "Community Involvement and Joint Operations Aid Effective Anti-Poaching in Tanzania," *Parks*, March 2014; Angela Anderson, *Modern Intelligence Measures to Combat Animal Poaching: A Conservation and Counterterrorism Strategy*, MS thesis (Erie, PA: Institute for Intelligence Studies, Mercyhurst University, 2014).

command, control, and communications; construction and operation of operations centers; operational planning; counterintelligence and anti-corruption; counter-threat financing; small-boat operations and port security; conducting and coordinating multi-actor operations (state agencies, NGOs, etc.); vetting military contractors and veterans; logistics and mobility; developing community-based security forces; and professionalization, defense institution building, and security sector reform.

VIII. Conclusion

Wildlife crime is an expanding and increasingly violent international problem whose strategic profile and importance is growing. Demand for military and security assistance for CWT is thus expected to rise as well. Proving such assistance can have sound strategic reasons that can mutually benefit assisting and host nations.

However, wildlife crime is complex, variable, and has unique dimensions; it is embedded in wider environmental, market, political, cultural, governance, and (often) conflict dynamics. Thus, there are significant risks that programs could be ineffective at best, squandering resources that could be more effectively applied to other challenges, and, at worst, produce significant unintended negative consequences. Security cooperation planners should therefore carefully assess and design programs and measures of success based on a thorough understanding of the type and context of the threat, the operating environment (natural, political, legal, cultural), the strategic objectives, all stakeholders, and existing strategies (if any), as well as risks.

Annex A: Further Reading

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