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Wildlife crime

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PREFACE

Forum on Crime and Society is a United Nations sales publication issued by the United Nations Office on Drugs and Crime (UNODC), based in Vienna. It is published in the six official languages of the United Nations: Arabic, Chinese, English, French, Russian and Spanish.

Forum presents policy-oriented articles on crime prevention and criminal justice. It focuses on trends and practices in the field of criminal justice that are of special significance to the international community.

The present issue of *Forum* is devoted to the subject of wildlife crime. It is the tenth issue of *Forum* to be published and widely distributed to a varied readership. Past issues of *Forum* are available on the UNODC website (www.unodc.org/unodc/en/data-and-analysis/Forum-on-Crime-and-Society.html).

All contributions to the present issue of *Forum* have been written by the authors in their personal capacity and should not be regarded as official views or positions of the institutions they represent.

There is an inherent tension between economic development and environmental protection. As global consumption grows, so, necessarily, do the demands on our planet. Sustainable development is the elusive compromise between our collective desire to end poverty and our need to keep the Earth habitable. As the articles in the present volume illustrate, this compromise can be reached only when development and conservation considerations are soberly reconciled.

The first article in the present issue looks at the reasons why a poacher might decide to pull the trigger. Understanding this motivation is very important, because the illegal trade in wildlife is different from other illicit markets, such as drug trafficking. With most forms of contraband, the associated social harm occurs when the commodity is used in the destination market. With wildlife it is the reverse: the damage occurs when the animal or plant is harvested at source. Interviews with poachers and community members in the Central African Republic revealed that the price of ivory in China is only one of several reasons why a hunter might choose to shoot an elephant. For local people, the meat may represent more value than the ivory, and some poachers may be motivated more by tradition than by profit.

On the other end of the trafficking chain, research by the Wildlife Justice Commission has given unprecedented insight into the significant but largely

unrecognized rhino horn market, in the village of Nhi Khe, close to Hanoi, in Viet Nam, which caters to tourists mainly interested in ornamental objects, rather than medicine. On the basis of a survey of selling prices conducted in the field, the researchers found a much lower average price for raw rhino horn than is commonly reported, approximately \$26,000 per kilogram, rather than \$60,000, as has been widely cited. It is unclear whether this difference represents a declining trend in the price of horn or is simply an artefact of exaggerated claims made in the past. If it is the latter, it is cause for concern, since, as has been argued elsewhere, inflated values can actually provide an incentive for further wildlife crime. However, the researchers also observed a further decline in price over 26 months, down to approximately \$18,000, suggesting that supply may have outstripped demand. This could be good news for the rhinoceros, at least in the short term.

Vanda Felbab-Brown summarizes some of the findings presented in her recently published book, *The Extinction Market: Wildlife Trafficking and How to Combat It*, in an article focused on the persistent policy struggle within the wildlife protection community. She describes three distinct groupings of conservationists, whose approaches to wildlife protection appear hopelessly at odds with one another. Animal rights activists are drawn to a straightforward prohibitionist approach: simply ban the trade in wild species. An opposing constituency argues that threatened wild species will not survive if they serve no economic purpose, and that regulated international trade is essential for conservation. A third group puts the empowerment of local communities first, rejecting what they see as a neocolonial dimension to the wildlife protection discourse. Felbab-Brown argues that, as in the case of illegal drugs, the correct policy approach to take depends on context. There can be no shortcut to understanding the particular dynamics of individual wildlife trafficking flows, and pragmatism must trump ideology if we are to have any hope of preserving vulnerable species.

As was suggested in the 2016 UNODC *World Wildlife Crime Report: Trafficking in Protected Species*, “illegal trade could be reduced if each country were to prohibit, under national law, the possession of wildlife that was illegally harvested in, or illegally traded from, anywhere else in the world.”* This idea stems from the approach taken by the United States under the so-called Lacey Act. In their article for the present issue, legal researchers from the International Union for Conservation of Nature examine the legislation from an international perspective, exploring implications of the United States law and the possibility that other countries could adapt it for their own legal systems. The authors conclude that the Lacey Act has the potential to be used as

* United Nations publication, Sales No. E.16.XI.9, p. 11.

a model for legislation in different jurisdictions and to provide an effective means to combat illegal trafficking in wildlife through concerted global efforts.

The final article examines a situation in which Lacey Act-type legislation could have prevented an ecological catastrophe: the recent extraction of thousands of tons of an environmentally important timber species in West Africa. In the absence of Lacey Act-type laws, this resource, though illegally exported, was legally imported. The article provides a case study of the tremendous challenges surrounding legal and equitable resource extraction in many developing countries. As the economies of developing countries will be based on natural resource extraction for the foreseeable future, management of the extraction process will deeply inform the way they develop. And because they are poor, such countries will require international assistance to regulate the extraction.

All of the articles in the present volume recognize the inherently international character of environmental protection. Perhaps more than any other issue, the protection of our planet requires actions that transcend national sovereignty and may be at odds with individual short-term efforts to maximize utility. For this reason, the United Nations and other international organizations will continue to play an important role in mediating, monitoring and enforcing environmental protection agreements.

Editorial policy and guidelines for publication

The Editorial Board invites scholars and experts from around the world to contribute articles to *Forum* on criminological and socio-legal issues. Articles submitted for publication must be original. That is, they should not have been published elsewhere. The length of manuscripts to be considered for publication as articles should not exceed 6,000 words. Manuscripts should be submitted in electronic format and preferably also in hard copy and should be accompanied by the curriculum vitae of the author and an abstract.

All manuscripts, reviews and correspondence should be addressed to the Managing Editor of *Forum*, either by mail (Research and Trend Analysis Branch, United Nations Office on Drugs and Crime, P.O. Box 500, 1400 Vienna, Austria) or by email (unodc-globaltipreport@un.org).

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THE MOTIVATIONS OF ELEPHANT POACHERS IN THE CENTRAL AFRICAN REPUBLIC

Ted Leggett* and João Salgueiro**

Abstract

Why does a poacher decide to pull the trigger? Understanding this motivation is very important, because the illegal wildlife trade is different from other illicit markets, such as drug trafficking. With most forms of contraband, the social harm is felt when the commodity is used in the destination market. Wildlife is the reverse: the damage is done when the animal or plant is harvested at source. Interviews with poachers and community members in the Central African Republic reveal that price of ivory in destination markets is only one of a number of reasons why a hunter might choose to shoot an elephant. For local people, the meat may represent more value than the ivory, and some poachers may be motivated more by tradition than profit. These dynamics should inform the development of elephant protection strategies.

Keywords: elephant, ivory, poaching, conservation, Central African Republic

Introduction

Trafficking in wildlife is different from trafficking in other forms of contraband. In most criminal markets, the damage caused by illicit trafficking only accrues when the contraband reaches its final consumer. In contrast, the main harm caused by trafficking in wildlife occurs when the contraband is sourced. Strategies aimed at reducing wildlife crime should take this difference into account.

For example, drug trafficking is illegal owing to the harmful effects that drug consumption has on end users. Even though measures are taken to prevent the cultivation of illicit drug crops, the actual production of drugs is generally harmless if the drugs are never consumed. The situation with regard to wildlife is exactly the opposite. Once wildlife has been illegally sourced, the damage has been done, regardless of what happens later in the market.

Despite this fact, much international attention has been focused downstream, on interdiction and demand reduction. This is partly a product of the fact that the countries with the greatest capacity to address the problem are not

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themselves major source countries and thus cannot act directly to stop the poaching. Instead, they are compelled to act through countries that have much less capacity, for example, by funding training programmes for rangers. Because the impact of such assistance is hard to measure, efforts are often concentrated on less direct interventions. For example, the European Union Action Plan against Wildlife Trafficking articulates 30 action points, three to eight of which might have some direct impact on poaching.¹

The emphasis on interdiction and demand reduction makes sense if those actions are likely to meet the ultimate objective: the protection of threatened species. Even though live animals and plants are sometimes rescued and repatriated, in most cases, interdiction does not directly prevent the harm that the law was designed to address. Rather, the widely held notion is that, if a sufficient amount of contraband is seized and a sufficient number of traffickers are incarcerated, criminals will be deterred from participating in the market. Similarly, it is often hoped that demand can be reduced to the point at which it no longer poses a significant threat to the species concerned. In both cases, the intent is to reduce incentives for those who actually pull the trigger. Whether such an approach makes sense depends very much on the individual characteristics of the market concerned.

Since the international trade in African elephant ivory was banned in 1989, the international law enforcement community has cooperated to address the illicit market. Huge amounts of ivory have been seized and destroyed, much of it by countries that are neither sources of, nor destinations for, illicit ivory. In addition, many destination markets have tightened regulations to reduce demand. That approach assumes that, by destroying the market, the incentives for shooting elephants will also be destroyed.

Such an assumption is problematic, however, given the poverty in many communities abutting the elephant range. Bullets are cheap and abundant; unless there are other disincentives for pulling the trigger, it is difficult to imagine a price point at which poaching elephants would become economically irrational. In addition, there may be other reasons why elephants are poached, including conflict with human settlements, hunting traditions and local demand for elephant meat.

The present study was designed to better understand those who make the decisions that conservationists seek to influence: the poachers. Employing a

¹ Specifically, action points 4 and 5 relate directly to communities in wildlife areas. Point 25 relates to capacity-building for law enforcement, including in source countries, and points 26 to 30 could, to varying degrees, impact on local action. See European Union Action Plan against Wildlife Trafficking (COM (2016) 87 final).

series of semi-structured interviews, the lives and motivations of poachers living in the periphery of the Chinko Project Area in the eastern Central African Republic were explored. Over the last three decades, the Central African Republic has seen its elephant population dwindle from approximately 20,000 elephants (in 1998) to around 2,000 elephants, with the latest estimate for the Chinko Project Area being 120 elephants.² This loss is largely attributed to poaching.

Owing to the remoteness of the area, elephant poachers are able to self-identify as such without much risk to themselves, particularly if they speak retrospectively. With the assistance of a translator, co-author J. Salgueiro conducted interviews with a total of 19 male self-confessed poachers between the ages of 23 and 76, as well as one community focus group, in a series of villages over the course of 60 days in the spring of 2015. Interview subjects were identified through public meetings held in the villages, which were spread over a distance of more than 1,000 km. The results of that research are described below.

Elephant poaching in the Chinko Project Area

The Chinko Project was established in 2013, and obtained a governmental mandate to sustainably manage four former hunting blocks, which today comprise the Chinko Nature Reserve. At the end of 2014, the Chinko Project joined the African Parks Network, an international non-governmental organization that assumes management responsibility for wildlife areas in need of rehabilitation. The reserve covers roughly 19,000 square kilometres in the southern part of the Chinko River drainage basin, mostly in Mbomou prefecture, a sparsely populated area in the eastern part of the country, close to the African “continental pole of inaccessibility”³ in Obo. Inaccessible by road, it is approximately 800 km from the capital of the Central African Republic, Bangui, the closest major urban centre.

There are few permanent human settlements near the Chinko Project Area, for several reasons. Since independence, the Central African Republic has been a poor and conflict-ridden country, and infrastructure development in the eastern part of the country is poor. The Chinko Project Area lies near the borders with other conflict areas: South Sudan and the north-east

²Based on surveys documented in the African Elephant Database, available at www.elephantdatabase.org.

³The geographical term “continental pole of inaccessibility” refers to the most remote area of a given continent, usually defined by the area’s distance from the nearest coastline, but sometimes incorporating other factors.

Democratic Republic of the Congo. The Sudan lies to the north, and had historically sourced slaves from the area that is now the eastern Central African Republic.⁴ The area is also affected by tsetse flies carrying the parasite that causes animal trypanosomiasis, or nagana, making the area unattractive to the herdsmen who practice transhumance in the region.

Elephants are a protected species in the Central African Republic, and thus all elephant hunting is deemed poaching. The Chinko Project Area has long been the target of poachers, however, and all the subjects interviewed complained about the diminishing quantity of wildlife over time. Local people blame the loss largely on foreign poachers, who can be classed in at least three distinct categories:

- Professional Sudanese elephant poachers. Allegedly from a long lineage of hunters, they have raided the area for decades, but have been especially active since the 1970s, and have been armed with automatic weapons since the 1990s.
- Ethnic Fulani pastoralists from the Sudanese enclave of Kafia Kingi in South Sudan, who have increasingly moved their cattle herds through the area, poaching for subsistence and profit.
- The Lord's Resistance Army (LRA), which is active in the area and has been tasked by its leader, Joseph Kony, with acquiring ivory.

Sudanese traditional poachers

The Sudanese traditional poachers have been recently documented in the reports of the United Nations Panel of Experts on the Central African Republic. In May of 2015, the Panel noted the presence of two groups of some 200 Sudanese poachers in the eastern Central African Republic. After establishing a base camp, the groups were said to have split into smaller parties of between 20 and 30 men. The Panel described them as “reportedly experienced, well armed (mainly equipped with AK-type assault rifles ...) and feared by local communities and armed groups”, noting that they were known for attacking LRA groups in order to acquire looted resources.⁵

⁴R. S. O’Fahey, “Slavery and the slave trade in Dar Fur”, *Journal of African History*, vol. 14, No. 1 (1973), pp. 29–43.

⁵Final report of the Panel of Experts on the Central African Republic extended pursuant to Security Council resolution 2196 (2015) (S/2015/936), para. 112. http://www.un.org/ga/search/view_doc.asp?symbol=S/2015/936

According to one participant in a community focus group held in Fode:

It's been their job for ages. They've been coming to this area long before our ancestors did. They don't know how to do anything else to make a living, so they won't give up!

One elderly former poacher from Dembia recounted the way the groups operate:

The Sudanese get in and out through the Zemongo Wildlife Reserve. They use the Chinko and Bahr el Ghazal as their main entrance and exit. They usually arrive in the Central African Republic in December and leave in April. Each year, the poachers are the same individuals. They come together in a big group and then, once in the Central African Republic, they get separated into groups of 8 to 12 people. The ones that are on the ground will never denounce the one who is in the Sudan as the big boss. They've cleaned up everything. If you stop the Sudanese poachers, all the animals will come back.

One middle-aged poacher from Rafai, who claimed to have killed approximately 500 elephants over a 17-year career, commented:

The Sudanese used the bow and the spear until the end of the 80s, and then they started using the AK-47.

One of his neighbours later independently confirmed that observation:

During those times [the 1980s], the Sudanese still used the spear to hunt the elephants. Currently, very little wildlife remains. The Sudanese have taken it all.

According to one man from Rafai, who claimed to have killed more than 50 elephants during his 13 years of poaching:

By the late 90s, I noticed a fall in the number of elephants, as the number of Sudanese poachers started to become high. From an average of passing one animal per month, I began to pass one animal every three to five months. The Sudanese were not only poaching; if they caught you, they would steal everything (food, ammunition, ivory and meat), and at the end they would even tie you up. The Sudanese came in groups of 10 well-armed men with AK-47s and plenty of ammunition.

Contrasting the Sudanese with the LRA, who were mainly interested in food and rifles, another poacher in Rafai commented on the Sudanese predilection for lying in wait for other poachers:

The Sudanese would be waiting for you at the exit points: Agoumar, Banima and Madabazouma.

A poacher from Bakouma contrasted the Sudanese with the Forest Police. The police could be handled with a bribe, but:

If the Sudanese find you in the bush, then you will lose everything. They are many, groups of 10 to 15 men, and all well armed. Eight to twelve will have AK-47s and the rest come with axes. If they see you, they will leave you with nothing!

Despite this adversarial relationship, a number of poachers reported working for, or selling ivory to, people from the Sudan in the past. Indeed, according to the poachers, the primary buyers of ivory appeared to be Muslims from several countries, including Chad, Libya, Mali, Nigeria, Senegal and the Sudan. They were also cited as the source of firearms and ammunition.

In the 1980s and 1990s, many of the “bosses” were Congolese, but they were apparently expelled from the country in the late 1990s. Muslim traders took over until the civil war erupted in 2013, and they remained as the main buyers. Buyers tended to traffic the ivory through their home countries on its way to destination markets, and the poachers interviewed detailed the routes through each buyer country. In addition to buying ivory, many buyers sponsored hunting expeditions, lending weapons, ammunition and supply money. As several poachers recounted:

The ones who buy the ivory are mostly Congolese [from the Democratic Republic of the Congo], Muslim Sudanese and Nigerians.

After my Nigerian boss, another one came from the Democratic Republic of the Congo, and then one from the Central African Republic, a court president, a prefect and a subprefect.

My boss was a Chadian who was living in Bangassou, but he left during the conflict.

The boss comes to a village where elephant hunting is common. He stays there for a while before choosing the hunter he wants to support. It's like a man does with his wife. He first sees all the single women in the village before choosing the right one.

The terms negotiated with the boss for sponsorship apparently varied, with various arrangements made for the distribution of the ivory and meat. In some cases, the sponsor received all the ivory, while the hunters were allowed to keep the meat:

My boss lent me a .427 [rifle] and gave me ammunition and money for food for each one of us. In exchange, I had to deliver him half of the meat and all the tusks.

Each elephant was shared like this: one third of the meat for each — the boss, myself and the porters. Regarding the ivory, the boss would give me an agreed price per kilogram.

The boss kept 50 per cent of the ivory and one third of the meat. He usually gave me enough money for food and basic expenses for me and the porters, about 30,000 CFA francs [approximately \$50] for two weeks.

The agreement was that he [the boss] would keep the ivory at a fixed price for that year and I would keep the meat.

The meat was equally shared: half for me and the other half for the five porters. I would be paid a lump sum of 200,000 to 300,000 CFA francs [approximately \$375 to \$550] per pair of tusks.

Mbororo-Fulani pastoralists

A different group of Sudanese known to enter the Chinko Project Area and poach wildlife are Fulani pastoralists, known as “Mbororo”. These people are part of a larger population of Muslim Fulani whose origins are uncertain, situated across a wide swathe of land extending across the continent from West Africa to the Sudan, including populations in Cameroon, the Central African Republic, Chad, the Democratic Republic of the Congo and South Sudan. Traditionally semi-nomadic, they have had to adjust their lifestyles to the changing political climate.⁶

⁶Derrick J. Stenning, “Transhumance, migratory drift, migration: patterns of pastoral Fulani nomadism”, *Journal of the Royal Anthropological Institute of Great Britain and Ireland*, vol. 87, No. 1 (1957), pp. 57–73.

As noted above, the Chinko Project Area has been outside the traditional transhumance routes for all but the most desperate herdsmen because of the risk of nagana. In the past, many Mbororo had access to grazing land in the Sudan, but some (particularly the Danedji, who herd white cattle) did not. Maintaining small farmsteads around Kafia Kingi, the Mbororo would herd their cattle southward through the eastern Central African Republic to the market in Bangui, availing themselves of the free pastureland, but avoiding the areas to the south where tsetse flies were prevalent.

Typically, the herds would be preceded by scouts, who would burn the bush as they advanced. That practice served several purposes, including to clear the way for the cattle, to kill snakes and parasites and to ensure a supply of fresh young grass for the herds. It also flushed out wildlife, exposing it to the hunters' guns.

That migratory pattern has changed radically in recent years, owing to several factors. The gaining of independence by South Sudan in July 2011 produced conflict along the borders, and many of the herdsmen's farms were attacked during that time. Their losses were compounded by robberies in the Central African Republic as the civil war developed and the market in Bangui became inaccessible. As a result, many independent herdsmen were forced to sell their cattle to a few powerful Sudanese, who amassed large herds. Interviews with those herdsmen conducted by the Chinko Project in April 2015 found that just four large-scale cattle barons reportedly owned most of the herds passing through the area.

In the early 2010s, the provision of cattle immunization that was low-cost or free of charge made pasturing in the southern parts of the Central African Republic more attractive. The cattle barons hired back the pastoralists to guide the large herds on the traditional migration, arming them and paying a salary. The arms provided for defending the cattle could be put to multiple uses, and poaching, one of those uses, has since become a way for those employees to subsidize their income.

Owing to local instability, some herdsmen chose to take their families with them. Traders, usually of Arab descent, also accompanied the herdsmen. The new destination market became Nzako, close to Bangassou, in an area of the Central African Republic just north of the border with the Democratic Republic of the Congo.

Although the conflict between these herdsmen and the local agriculturists is perhaps less intense than in the northern parts of the country, the herdsmen are as well armed as the professional poachers, and will take whatever animals they come across.

One poacher from Bangassou asserted that the elephants became scarce when the Mbororo arrived:

The [foreign] Mbororo have invaded all the land with their cattle and AK-47s. It's the fault of Kolingba [President of the Central African Republic from 1981 to 1993], as he allowed their entrance into the country.

A young poacher from Agoumar argued that the Mbororo were less problematic than the traditional Sudanese poachers:

If you find [Sudanese] poachers on your way, it's better to hide or run away, as they will take everything you have! The Mbororo do the same, but less aggressively. Their main purpose is to protect their cattle.

Others saw the Mbororo more as facilitators:

The Mbororo, mainly the Ouda—the ones who use tattoos and dreadlocks—are accomplices with the Sudanese in regard to the poaching. They sell the meat and the ivory to them. When the [Sudanese] poachers need to buy some products (sugar, oil, rice, tobacco), they will sometimes dress up as Mbororo to get into the town. They can also ask any of us to buy it for them in town when we meet in the bush.

A poacher from Bakouma said the biggest problems for the local poachers were the LRA and the Mbororo:

The number of Mbororo has grown so much, particularly since 2010!

Mbororo have also been accused of cooperating with the LRA.⁷ The two groups do come from the same greater region said to be hosting Joseph Kony (Kafia Kingi), and it is likely that they prefer mutually beneficial trade over conflict.

The Lord's Resistance Army

Although the exact number of pastoralists in the region is unknown, it appears that the LRA is the least numerous of the foreign groups involved in poaching there. According to the Panel of Experts, the overall number of LRA militants

⁷International Crisis Group, Report No. 215, "The security challenges of pastoralism in Central Africa", 1 April 2014.

in the Central African Republic was estimated at between 119 and 188 fighters in 2015.⁸ According to the interviewees, the LRA militants arrived too late to engage in much poaching, and were seen more as a threat to the local hunters than to the dwindling elephant population.

According to a group discussion held in Fode, the presence of the LRA was one reason local elephant poaching stopped altogether around 2012, although, as discussed below, the lack of elephants was the main reason. One respondent in Rafai said he stopped poaching in 2007 when elephants became scarce and one of his porters disappeared. He said he believed the man had been kidnapped by the LRA or killed by Sudanese poachers, and he had been laden with the difficult task of explaining that to the porter's family. A younger poacher in Rafai also said his decision to stop poaching was due to elephant scarcity and the presence of the LRA. Another former elephant poacher in Lengo had switched to buffalo before giving up hunting altogether. He said the major risk was to "find the LRA on your way. Meat and rifles will be stolen!"

The LRA remains active in the area. In the first eight months of 2016, 7 out of 16 fatalities in the Central African Republic linked to the LRA and recorded by the LRA Crisis Tracker occurred in the periphery of the Chinko Project Area. Over the last seven years, the LRA Crisis Tracker has recorded 149 LRA-related fatalities and 470 abductions in Mbomou prefecture, the area where the bulk of the Chinko Project Area is located.

All these rival groups have been more than just a security threat for local poachers; they have been competitors for a rapidly diminishing local resource:

I believe that, one day, elephants will no longer exist here. But anyway, if I stop hunting now, they will still be gone, as somebody else will do it. So better to do it myself!

The decision to poach

Aside from the threat of foreign poachers, the lack of elephants was clearly the primary reason for abandoning elephant poaching. At some point, the investment of time spent looking for an elephant exceeded the value of the return. Since most of the poachers were farmers, there were limits to the amount of time they could invest away from home. Most of the poachers seemed to

⁸S/2015/936, para. 93.

think one week in the bush was about the right amount of time to spend looking for an elephant, with two weeks being the longest acceptable duration:

A good hunt means one week to hunt one elephant.

A good hunt is when you find something valuable (elephant or buffalo) after one week. Two weeks is already not so good, and more than that is considered a disaster.

Some of the older poachers remembered when a few day's hunt would predictably yield at least one elephant. They described encountering herds of 30 to 40 elephants in the 1970s.

The elephants were plenty during the 70s and 80s. They would come to the village and mess around.

During the 80s, there were so many elephants that they could come very close to the villages and destroy the fields. The Government authorized you then to shoot the ones who got into the village in order to prevent damage to the fields.

In recent times, however, elephant poaching seems to have reached the point of diminishing returns, with elephants being hard to find and having smaller tusks. This has apparently caused an increase in the price poachers can command for ivory (see the table 1 below).

Table 1. Price paid to poachers per tusk, by decade

	<i>Decade</i>			
	<i>1980s</i>	<i>1990s</i>	<i>2000s</i>	<i>2010s</i>
Price per tusk ^a	\$40	\$50	\$60–80	\$100–140

^a For the first three decades, the presented value corresponds to a tusk weighing at least 10 kg; for the 2010s, the value corresponds to a tusk weighing 7 kg.

But rising prices have not offset the growing scarcity:

Today you have a lot of effort for little result. You can walk in the bush for two to three weeks and find nothing. It's true that ivory is becoming more and more expensive, but we don't find animals anymore.

During the 60s and 70s, I could find a single tusk weighing 60 kilograms or even 100 kilograms and two metres long. At the beginning, we could

find one or more elephants within two days after leaving the village. More recently, sometimes two months are not enough to find a single one.

The current Sudanese poachers complain about the almost non-existent elephant population—two months on the ground and nothing was found!

I've looked for them this year for three months, but with no result. They are very few and difficult to get, even though I haven't yet lost the hope of finding one.

According to the interviewees, elephant meat was as much an attraction for the poachers as the ivory; in some cases, the meat was all they received. It was generally smoked on the spot and could sell for remarkable prices in local markets:

Elephant is the most expensive meat. It's not anybody who can afford it! But as everyone loves it, you'll always pay something, even if it is just for a little portion.

The ivory price has increased progressively, but the meat price has always fluctuated a lot: 1 kilogram of meat could be sold for 2,000 CFA francs [\$4] or 7,000 CFA francs [\$13] at the same time. In Bangui, it would rise to 20,000 CFA francs [\$40] per kilogram.

The price of elephant meat in Bangui was approximately five times that of beef, and its sale could actually provide more profits to the poachers than could the tusks. According to the poachers' statements, the animals were incompletely butchered; nevertheless, at the Bangui price, just 100 kilograms of elephant meat would bring in \$4,000.

Several poachers said they would return to the job if elephants were not so scarce and security were better:

I have these skills in my blood. If the elephants come back, I'll also go back to the forest!

If the elephants were back and the Sudanese left the area, I would certainly go back to that job.

If the LRA was not there and the number of elephants increased, I would go back to the bush.

I've decided to stop, as there are almost no elephants remaining and the LRA presence in the area has threatened the population and those in the bush.

Show me where they are and I'll finish them all. I'll be known as the one who killed the last one.

Other considerations that might conceivably deter poachers were apparently not as important as might be assumed. While some expressed their knowledge and concern that elephant poaching was against the law, and all took measures to avoid detection, the threat of law enforcement did not appear to be much of a deterrent. Although several of the poachers had encountered the enforcement agents of the Central Inspectorate of Water and Forests ("*Eaux et Forêts*"), most did not regard them as a significant obstacle:

I've never had any problems with any ranger or public servant from *Eaux et Forêts*.

During all these years, I've never had any problem with *Eaux et Forêts*. If I saw some of them, I would just hide myself.

Eaux et Forêts have never been a problem. In the worst case, you pay 100,000 to 150,000 CFA francs [\$180 to \$280] and that's fine.

Everything was already arranged between their boss and my boss so that they never troubled me!

I once encountered the rangers on my way to Bria. They confiscated everything I had—my ivory, money, food and bicycle. But there was no court or fine. [In such cases,] the boss will then talk with *Eaux et Forêts* and solve the problem. He will pay the fine and that's it. We can go back to the bush.

If you're caught by the *Eaux et Forêts* rangers, you'll get a penalty of 500,000 to 600,000 CFA francs [\$935 to \$1,120] and they'll keep your permit. I was in prison four times in one year, but each time it was just for a few days.

The poachers recounted being injured by animals while poaching and having lost relatives to elephants, but the danger attendant to poaching was also part of the attraction:

Hunting an elephant, it's an act of braveness; it's one's great pride!

To hunt an elephant, you need a very brave heart, otherwise you'll run away.

What attracts me the most to elephant hunting is the brave heart you must have to deal with it. It's the battle with the beast.

I've become a man through hunting. Before that, I was just a kid.

Another factor that reinforced participation was the sense of identity as a poacher. It was regarded as a prestigious position in rural society, attracting the admiration of men and women alike. A number of poachers said that hunting was a family tradition:

Hunting elephants was my father's job. I've learned it from him. It's my heritage. That's why I can't stop doing it.

My grandfather did it, my father did it, I'm doing it and some of my sons will do it.

However, given the circumstances, some thought that formal employment was a better option:

Nowadays, I wouldn't go back to the bush for hunting as I've got a job. It's more comfortable, safer and lasts longer. Finally, I can earn a higher income, which is better for me and my family.

I want my kids to finish school. They will have a better future with that, rather than with hunting.

Most of the new generation is not interested in hunting big wildlife anymore because there's almost nothing; so, they look to mining and other jobs.

Discussion

Owing to its unique characteristics, it is difficult to draw general conclusions from any study of the Chinko Project Area because:

- There are few elephants left to poach in the Project Area.
- The south-eastern Central African Republic is situated in a very troubled part of the world.
- Compared with the elephant populations in areas such as Eastern Africa, the Chinko Project Area is very remote.
- Even by rural African standards, the area is poor and underdeveloped.

Nonetheless, the findings of the present study provide insights relevant to elephant protection interventions, and to the protection of wildlife more generally.

Firstly, given the lack of competing opportunities, hunting is likely to remain an important part of the livelihoods of many people in rural Africa. Elephant meat is a traditional and highly prized meat, with a considerable cash value, even in poor areas. For illegal armed groups and nomadic pastoralists, few animals provide a better return on investment in ammunition. In addition, elephants are hazardous neighbours for farming communities, causing damage to crops and easily capable of killing human beings. Regardless of what happens in terms of the global ivory market, it seems likely that elephants will continue to be hunted, unless strong measures are taken to prevent such hunting.

Secondly, there is more to being a hunter than simply earning an income. Hunting has value as a cultural tradition and provides a sense of identity. That sense was expressed by the interviewees, and appears to be even more intense among the Sudanese, who have reportedly travelled hundreds of kilometres south of the Sudanese border and spent months in the Chinko Project Area looking for the few remaining elephants. Economic considerations cannot be paramount for those who invest so much effort for so little return. The local poachers reported that the Sudanese hunted with traditional weapons as recently as the late 1980s, at a time when the Second Sudanese Civil War was in full swing and automatic weapons were likely available. The commitment of such people to elephant hunting is unlikely to be affected by the price of ivory.

More broadly, hunting is a way for economically disempowered men to demonstrate their courage and prowess. The interviewees were unanimous in their disregard for the agents of *Eaux et Forêts*, and the marginal increase in risk posed by law enforcement may even serve to increase the attraction to hunting. But, as the interviews show, the sort of serious security threat posed by armed Sudanese or the LRA does in fact provide a strong deterrent. In that regard, for the poachers, there is a distinct difference between courage and foolhardiness.

Traditions change, of course, and one poacher reported that young people had become more interested in jobs, and particularly in the recent boom in artisanal mining, than in hunting. As in the rest of the world, Africa is urbanizing rapidly, and those able to leave the remote areas where elephants roam are likely to do so. In the Central African Republic, the civil war has limited migration possibilities, but peace in the capital would likely fuel emigration from any region threatened by the LRA or other militants.

The incursion of herdsmen into an area formerly protected from the impact of pastoralism by the prevalence of tsetse flies illustrates the ongoing tension between environmental and developmental considerations. International agencies have sponsored the immunization of hundreds of thousands of live-stock animals. That intervention has had the unintended consequence of increasing the animals' transborder range, with potentially serious consequences for both security and the environment. Few anticipated the impact the vaccination campaign would have on wildlife, but such disruptions to both the political and ecological balance predictably produce both winners and losers. The interventions of the international community must be fully assessed, taking into account a range of potential impacts, before implementation, otherwise there is a risk of unwittingly doing a great deal of harm.

Finally, the dominant narrative on conflict and wildlife crime portrays illegal armed groups as major contributors to species loss. In contrast, the interviews revealed the paradoxical roles that militants can play as both predators and protectors of wildlife. Even though wandering armies can cause considerable environmental damage, they can also keep wild areas wild, by deterring both formal and informal exploitation of resources. The local poachers interviewed made it clear that, without the threat of armed groups, they would be back in the bush, shooting the elephants the militants left behind.

If nothing else, the findings of the present study should prompt some reconsideration of elephant protection strategies whose focus is solely downstream. When a kilogram of cocaine is seized, that is one kilogram that will not be consumed. In the case of drugs, interdiction both incapacitates and, hopefully, deters. But that is not necessarily so in the case of wildlife. If the objective is to protect elephants, there is no substitute for investment in local protection measures, as inconvenient and difficult as such interventions may be.

ILLEGAL RHINO HORN TRADE IN NHI KHE, VIET NAM

Sarah Stoner, Pauline Verheij and Mickey Jun Wu*

Abstract

The village of Nhi Khe in Viet Nam caters to tourists mainly interested in ornamental objects made from rhinoceros horn, rather than medicine. Based on field collection of selling prices, the research finds a much lower average price for raw horn than is commonly reported: about US\$26,000 per kilogram, rather than the US\$60,000 widely cited. It is unclear whether this difference represents a declining trend in the price of horn, or is simply an artefact of exaggerated claims in the past. If it is the latter, this is disturbing, since inflated values can actually provide an incentive for further wildlife crime. The research also found a further price decline over 26 months of observation, down to about US\$18,000, suggesting that supply may have outstripped demand. This could be good news for the rhinoceros, at least in the short term.

Keywords: rhino horn, illicit trade, wildlife market, sales, Viet Nam

Introduction

As early as 2012, journalists reported that Nhi Khe, a village just south of Hanoi, was a major hub for the processing and sale of rhino horn, ivory, tiger, pangolin and helmeted hornbills. The following article is based on research conducted in this open wildlife market by the Wildlife Justice Commission (WJC) in 2015 and 2016.

The Nhi Khe wildlife market is predominantly tailored for a Chinese clientele, with the larger shops arranging the smuggling of products into China. The Vietnamese traders used Chinese terms in relation to illicit trade—rhino horn was often referred to as Hei Huo (black product), while ivory is known as Bai Huo (white product)—and prices were primarily quoted in Chinese renminbi. The traders were found to use Chinese bank accounts for the receipt of payments for wildlife products, thus facilitating the movement of significant illicit financial flows. In addition, we observed an emerging trend of Chinese buyers using WeChat Wallet, a payment application within the Chinese instant messaging service WeChat, to pay Vietnamese suppliers for goods purchased.

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Indications of corruption were apparent, including:

- The reported bribery of local and provincial government officials by traders in Nhi Khe to ensure protection.
- Bribery of Vietnamese customs officials to allow the smuggling of wildlife products into China.
- Traders demonstrating prior knowledge of planned police inspections.

During the one-year investigation, large amounts of rhino horn, ivory, tiger and other illegal wildlife parts and products were observed being offered for sale. The quantity of raw and processed rhino horn alone amounted to 1,061 kg, with an estimated value of \$42.7 million.

Methodology

Six covert field investigations were undertaken in Viet Nam: in July, September and October of 2015, and in March, June and October 2016, respectively. Another field investigation was conducted in China in September and October of 2015. Covert recording equipment was used to gather evidence of illegal sales and capture conversations with traders. WJC mimicked trade practices it had observed and used Chinese investigators posing as potential buyers from China.

In addition, 36 Facebook and 27 WeChat accounts were monitored to detect possibly illegal advertisements and sales of wildlife products. These sources were also used to map out connections between traders and learn about their lifestyles. Key traders were engaged in conversation on WeChat to obtain evidence, including on trafficking methods used and commodities offered for sale.

Nhi Khe

Nhi Khe is a village of around 600 families (2016 estimate). Most of those families work in the traditional handicraft business. In 2015, the investigators positively identified 33 individuals on social media and at the Nhi Khe wildlife market who were using the market to engage in illegal trade. In 2016, 14 of these 33 continued to be active, and an additional 18 were identified. Although many others may have been involved as well, we can conclude that at least 51 individuals were using the market to participate in wildlife crime, which underlines the importance of the market to the village.

Most of the people identified were wildlife traders, though there was considerable variation in the volumes and ranges of species in which they traded, as well as in the degree of their social media use. Others acted as translators, couriers, wholesale brokers and the like. The five Chinese translators identified were Vietnamese women who typically accompanied Chinese customers to the village. Day rates for translators were quoted at 150 renminbi, equivalent to \$22. The interpreters were crucial in enabling the trade, because they assumed the role of central communicators. They escorted clients to the village, facilitated meetings to view products and helped to negotiate prices.

The retail outlets selling wildlife products offered items derived from many species, including rhino horn, ivory and rosewood. These outlets operated on a number of policies similar to those expected of legitimate businesses, including:

- Volume discounts.
- A deposit policy (usually quoted at between 20 and 30 per cent).
- Refunds for shipments intercepted by enforcement agencies.
- Use of international bank accounts.

A much larger volume of trade was detected in 2016 than in 2015, but this cannot truly be interpreted as a trend, because subjects identified as trading in greater volumes were targeted for surveillance after the initial assessment. The total monetary value of rhino horn traded during the entire investigation, both raw and as worked products, amounted to \$42,700,000, of which \$4,009,413 (9 per cent) was observed in 2015 and \$38,690,587 (91 per cent) in 2016. In contrast, investigators found that some traders who were observed trading via their WeChat or Facebook accounts in the first period appeared to have stopped doing so during later observation. Many of the premises identified in 2015 were not visited in 2016, and trading at those sites may still have been ongoing.

WeChat (51 per cent) and Facebook (20 per cent) were found to be the social media platforms of choice for conducting illegal wildlife trade. While fewer subjects used both platforms (10 per cent) to advertise their products, others displayed a clear preference for one or the other. This may have been an indication of their target audience, given that Facebook is not available in China and WeChat is a Chinese platform. On WeChat, over the course of one year, at least 8,300 images of wildlife products illegally offered for sale were documented. Analysis of the estimated profits generated on WeChat and Facebook indicates that catering to a Chinese rather than a local clientele likely yields greater returns.

Quantities and prices

During the entire investigation, approximately 1,061 kg of rhino horn, both raw and processed, was observed being traded, corresponding to between 401 and 579 rhinos killed (see table 1).¹ Since about 1,000 rhinos have been poached annually in recent years, and far lower volumes before 2013, we can conclude that the Nhi Khe market is substantial. The total monetary value of those rhino horn parts and products was estimated at \$42,700,000. While profit margins are unknown, this represents a significant sum, given the limited number of traders identified and the size of the village itself.

Table 1. Total monetary value of horns and horn products, and estimated number of rhinos

Commodity type	Number of rhinos affected		Estimated value	
	Min.	Max.	(Vietnamese dong)	(United States dollars)
356 horns and horn tips	178	356	952 400 000	42 700 000
Processed products	223	223		
	401	579		

Many different types of rhino horn products were offered for sale, as well as the horns themselves. Table 2 provides an overview of the type and number of products directly observed being offered for sale and highlights the prevalence of artefacts and jewellery products being traded. Beads made from rhino horn were the most frequently observed item being offered for sale.

Media reports commonly report high prices for raw rhino horn in Viet Nam. The most frequently cited figure is \$65,000 per kilogram,² inviting comparisons with the price of gold. However, such prices were not observed during the investigations.

¹The following calculation was used:

- For raw horn, in the 2015 investigation, only front horns were observed, therefore, statistically, 1 horn or horn tip was considered to represent 1 rhino. During the 2016 investigation, several back horns were observed in addition to front horns. Therefore, statistically, 1 horn or horn tip was considered to represent between 0.5 and 1 rhino.
- For processed horn products, to obtain the equivalent number of rhinos killed, the total weight recorded was divided by 2 kg, which was the average weight of rhino horns observed in this investigation.

²See, for example: Achim Steiner, "Putting a stop to global environmental crime has become an imperative", *UN Chronicle*, vol. LI, No. 2 (September 2014).

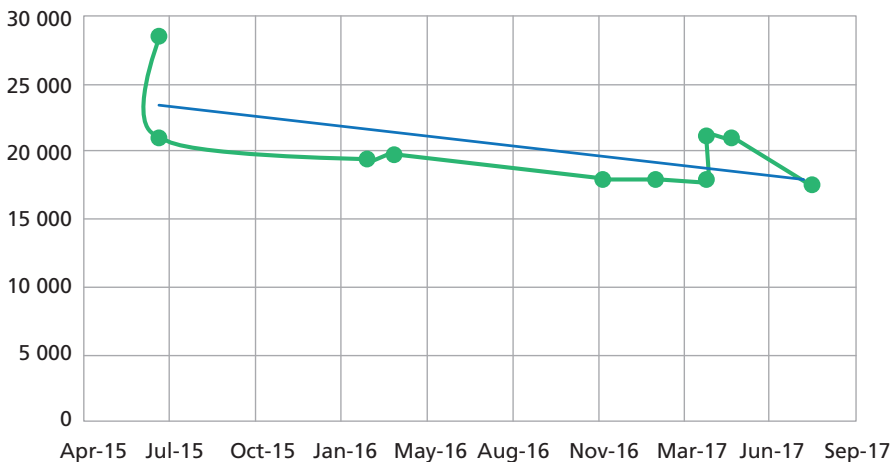
Table 2. Type and number of rhino horn parts and products observed being offered for sale³

	<i>Whole horns and horn tips (pieces)</i>	<i>Bangles (pieces)</i>	<i>Bracelets (pieces)</i>	<i>Pendants (pieces)</i>	<i>Beads (pieces)</i>	<i>Libation bowls and cups (pieces)</i>	<i>Offcuts (in kg)</i>
2015	41	43	79	183	514	139	15.6
2016	315	738	451	1 595	9 609	960	109.0
Total	356	781	530	1 778	10 123	1 099	124.6

Each time data were collected, prices were taken from at least eight sellers in at least seven locations, both within and outside Nhi Khe. The average price calculated for 1 kilogram of raw rhino horn was \$26,653, or less than half the figure commonly cited in the media. Worked rhino horn was more expensive, averaging \$74,685 per kilogram for bangles, bracelets, beads or pendants, and \$65,500 per kilogram for libation cups (including the lids).

Following the initial investigation, prices were continually monitored using the same methodology. During two years, price data were collected specifically for raw rhino horn. Between the first data point being obtained in July 2015 until the latest data point obtained in April 2017, the price of raw rhino horn does appear to have decreased by 39 per cent (\$10,500) (see figure I). The reasons for this downward trend remain unclear.

Figure I. Raw rhino horn prices in United States dollars (July 2015 to April 2017)



³The greater volumes recorded in 2016 are likely to have resulted from enhanced investigation methods rather than from an increase in trade.

As with elephant ivory, average prices can be misleading if the material is used for artistic purposes, as various factors affect the quality of the product. First, the structure and colouring of a rhino horn differs from base to tip. If a segment of rhino horn is cut from the middle and held up to the light, it has a translucent, amber glow. In contrast, horn tips are compressed, almost black, and the material is much firmer than the base of the horn.⁴

Colour and density can affect the price. In general, the blacker the horn, the more expensive it will be. The most precious part is the core, sometimes referred to as the “meat”, where it is darkest, gradually fading into brown, red, yellow and even white in successive concentric rings towards the surface. The tip is the most expensive part of the horn because that is believed to be where the energy of the rhino is concentrated.

Historically, Asian rhino horn has been regarded as related to the fire element and, as such, more potent and effective for medicinal purposes than its African rhino horn, which has been seen as representing the water element. Today, relative scarcity further enhances the value of Asian rhino products. Even in 1991, a survey of rhino horn stocks in Taiwan Province of China found that Asian horns were 29 times higher in price than African horns, and that retail prices varied by a factor of between five and nine as a result.⁵ During the research, little or no reference was made to the species of rhino from which the horn originated. There could be two reasons for that. Firstly, the current investigation took place 25 years after the survey described and there were fewer Asian rhino horns in circulation at that point. Secondly, the recent investigations showed that there was a paucity of rhino horn products being traded for medicinal use and therefore any demand or preference for “fire” horn was irrelevant.

Trafficking and corruption

In addition to selling rhino horn products, the traders provided delivery services to addresses in China. A destination frequently offered was the Chinese province of Guangxi, in particular the border towns of Pingxiang (often referred to as Puzhai) and Dongxing. Dongxing abuts the Vietnamese border town Mong Cai and is well known as a transit point for wildlife contraband.

⁴Richard Emslie and Martin Brooks, *African Rhino: Status Survey and Conservation Action Plan* (Gland, Switzerland, and Cambridge, United Kingdom of Great Britain and Northern Ireland, International Union for Conservation of Nature, 1999).

⁵Ibid.

When asked about delivery to other provinces in China, traders either offered referrals to other contacts or were reluctant to discuss the matter.

This strong preference for certain delivery points suggests their services are dependent on connections with specific corrupt border control officials. Investigators observed that the delivery services were important to Chinese customers. Curiously, delivery to Yunnan Province was never offered, even though it, too, borders Viet Nam. The fee requested varied by destination, averaging \$357 per kilogram to Pingxiang, on the border, and \$893 to Fujian Province, which lies further away.

In addition to corruption in border control, those investigated suggested that local police corruption was essential to their business model. For example, after a crackdown, one trader actually celebrated the arrests of his rivals. A major broker discussed the recent arrests of other subjects in Nhi Khe during a meeting with undercover investigators and stated it was good for business. Unlike other environments, where law enforcement action is perceived as a threat to the criminal, in a corrupt environment it acts as an essential facilitator of the crime.

- Informant:** Arrests are good. Less competition!
WJC: You get more business.
Informant: Too many people do this now.
WJC: Have you been arrested in Viet Nam?
Informant: No.
WJC: Not arrested.
Informant: My connections in Viet Nam are good. I won't get arrested.
WJC: Really? You have good connections with the police?
Informant: Yes.
WJC: I hear they arrested some people. Their connections weren't as good.
Informant: They arrested small folk.

The significance of Nhi Khe

It is important not to generalize from what may be only the most visible and accessible portion of the market. That said, Nhi Khe is remarkable for the sheer volume of rhino horn that was on display during the observation period. The investigations showed that the horns of at least 400 rhinos were being traded. That is more than the national rhino populations of all but four States in Africa, and nearly half the number poached annually in recent years. The Nhi Khe market for rhino horn artwork and jewellery is remarkable for its

focus on Chinese customers. Although Viet Nam is understood to be a primary destination for rhino horn, it is also clearly a highly significant transit area for products ultimately bound for China. Of the more than 8,000 images posted on WeChat that we documented during the investigation, fewer than five featured offcuts of rhino horn. Since the covert investigators dispatched for the study were ethnically Chinese, any Vietnamese element of the market may have been neglected and the Chinese element may have been overrepresented. However, the products documented were estimated to be worth \$42.7 million, which likely accounted for a substantial proportion of the rhino horn market. The vast majority of that volume was found to be aimed at Chinese nationals.

Research that has relied on a review of trafficking patterns and expatriate involvement in Africa may have overstated the significance of the market for rhino horn in Viet Nam itself. It is unclear how long the domestic market and the market in China have been in place or how the situation has evolved over time. It also remains unclear whether the decline in the price of rhino horn observed in the course of the study is indicative of a long-term trend. The evidence suggests that the price was generally much lower than popularly supposed.

RECONCILING COMPETING POLICY APPROACHES TO WILDLIFE CRIME

Vanda Felbab-Brown*

Abstract

Conservationists may be roughly divided into three groups whose approaches to wildlife protection appear at odds with one another. Animal rights activists are drawn to a straightforward prohibitionist approach: simply ban the trade in wild species. An opposed constituency argues that these creatures will not survive if they have no economic purpose, and that a regulated international trade is essential for conservation. A third group puts the empowerment of local communities first, rejecting what they see as a neo-colonial dimension to the wildlife protection discourse. The author argues that, as is the case with illegal drugs, the appropriate policy approach depends on the context. There can be no shortcut for understanding the particular dynamics of each wildlife trafficking flow, and pragmatism must trump ideology if we are to have any hope of preserving vulnerable species.

Keywords: conservation, protection, policy, trafficking, regulation

Introduction

The planet is currently experiencing alarming levels of species loss caused in large part by intensified poaching. The poaching is stimulated by a greatly expanding demand for animals, plants and wildlife products. The rate of species extinction is now 1,000 times the historical average and the worst since the dinosaurs died out 65 million years ago. Like climate change, it merits to be seen as a global ecological catastrophe warranting high-level policy initiatives to address its human causes. In addition to irretrievable biodiversity loss, poaching and wildlife trafficking pose serious threats to public health. Wildlife trafficking and the consumption of meat from wild animals have been linked to diseases such as severe acute respiratory syndrome (SARS) and Ebola virus disease. Wildlife trafficking can trigger global pandemics. Wildlife trafficking can also undermine the security of forest-dependent communities,

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cause local, national and global economic losses, and even threaten national security. In response, Governments pursue policies to preserve species that can further undermine human security by restricting the access of poor populations to the natural resources on which they depend for their basic livelihoods.

Yet there is little consensus on what the best ways are to suppress wildlife trafficking. There are three schools of thought, and some of their policy recommendations are contradictory:

- The first school of thought, embraced by many environmental non-governmental organizations (NGOs) together with some conservation biologists, argues for intensified, even militarized law enforcement, increased penalties for poachers and ending the legal trade in wildlife.
- The second school of thought, adhered to by many economists of wildlife trade and some conservation biologists, maintains that bans will result in greater poaching and that legal trade should therefore be allowed.
- The third school of thought promotes community-based natural resource management. It is sceptical of market solutions and mostly maintains that local communities should have the authority to decide how local natural resources are treated, including whether animals are hunted and traded or protected.

Systematically evaluating the arguments for and against each approach, their promise in theory and their downsides in practice, is beyond the scope of this brief article.¹ Nonetheless, field research in Asia, Latin America and Africa into poaching and wildlife trafficking (as well as other illegal economic activities, such as illegal logging, illegal mining and drug trafficking), has given us some insight into how each of these three approaches affect wildlife and nature conservation efforts. The debates on this topic continue unabated and no consensus is in sight, even though we are some 15 years into yet another intense wave of poaching and wildlife trafficking. This lack of consensus is due not only to ideological differences and emotion, but also to the enormously varied outcomes that these three approaches have yielded. Overall, the failures outnumber the successes. As uncomfortable as proponents of these schools of thought might find it to admit, the suppression of wildlife trafficking requires policy experimentation, flexibility and adjustment. There is no single magic policy formula.

¹ For a more complete analysis, see V. Felbab-Brown, *The Extinction Market*.

The policy debates

The recent struggles over elephant poaching and ivory policy are emblematic of a wider search for policies to limit unsustainable hunting, counter poaching and suppress wildlife trafficking. Under what circumstances should wildlife trade be banned? Should there be blanket bans or strictly limited and specific bans? When, if ever, does legal trade result in the sustainable preservation of wildlife and when does it encourage unsustainable hunting and serve as a cover for poaching and wildlife trafficking? When and how can local communities be coerced into complying with wildlife regulations and under what circumstances do they internalize them? Should they be given an economic stake in conservation or should they be provided with alternative livelihoods?

Given the precipitous and irretrievable collapse of many species, the wildlife conservation community is desperate to find silver bullets, policies that will work under all circumstances. It is increasingly trying to learn from global drug policies and their decades' worth of successes and failures. In doing so, it is trying to enrich its debates, which, like the drugs debate, remain highly polarized.

The policy trend of the moment, one which many environmental NGOs advocate, is to have strict bans and tougher law enforcement.² According to some NGOs, no legal trade in wildlife and wildlife products should be allowed, particularly if it involves killing wild animals. Others oppose legal trade only under specific circumstances and for specific wildlife commodities, such as rhino horn and ivory sales. Some conservation biologists support the calls for far tougher law enforcement. Law enforcement authorities often also support bans, not merely because that serves their budgets (as is sometimes alleged by opponents of bans), but also because the coexistence of legal and illegal trade significantly complicates matters because law enforcement authorities have to sort through what is legal and what is not and because the legal trade provides loopholes that illegal traders exploit.

²See, for example, Nitin Sekar, "Legal trade backfired badly in 2008. So why try it again?" in "Debate: would a legal ivory trade save elephants or speed up the massacre?" *The Guardian* (London), 1 October 2016; Born Free Foundation and Species Survival Network, "Inconvenient but true: the unrelenting global trade in elephant ivory," report prepared for the fourteenth meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora, held in The Hague from 3 to 15 June 2007; Environmental Investigation Agency, "Stop stimulating demand! Let wildlife trade bans work", 14 March 2013. For a discussion of the debates, see also Daniel Stiles, "The ivory trade and elephant conservation", *Environmental Conservation*, vol. 31, No. 4 (2004), pp. 309–321; Erica Thorson and Chris Wold, *Back to Basics: An Analysis of the Object and Purposes of CITES and a Blueprint for Implementation* (Oregon, United States, International Environmental Law Project, 2010); and Rosaleen Duffy, "Global environmental governance and North-South dynamics: the case of the CITES", *Environment and Planning C: Government and Policy*, vol. 31, No. 2 (2013), pp. 222–239.

Yet when total bans on wildlife trade and hunting are introduced, they are often based on unrealistic expectations of the results that interdiction and law enforcement can deliver. Advocates of total bans often also underestimate how difficult it is to persuade poor marginalized local communities to abstain from poaching, on which they are dependent, and embrace conservation.

The view is widely held that only organized criminal and militant groups poach and traffic wildlife, and that poor communities are not involved. Its proponents usually demand stricter legislation and tougher penalties. However, this view is deeply flawed and can easily lead to counterproductive policies. Take, for example, the community-based nature reserves in the Laikipia region of Kenya, which have long been heralded as some of Africa's greatest conservation successes.³ The recent invasion of these nature reserves by pastoralists demonstrates once again that poverty, scarcity, drought and global warming are stronger motivators than any conservation policy. The notion, long held throughout Africa, that wildlife conservation is a white man's imposition on the indigenous population is being revived again.⁴ The sentiment is echoed throughout Asia and the Americas, where local populations often feel brutalized by conservation policies.⁵

For those reasons, many conservation biologists and conservation economists oppose bans and support market-based mechanisms to promote conservation. They point out that bans have often failed and that Governments, businesses and local communities need to be given material stakes in conservation; otherwise, conservation efforts will fail and species will be lost. Their adage is: wildlife stays if wildlife pays.⁶

³Jeffrey Gettleman, "Loss of fertile land fuels 'looming crisis' across Africa", *New York Times*, 29 July 2017

⁴Jane Carruthers, *The Kruger National Park: A Social and Political History* (Pietermaritzburg, South Africa, University of Natal Press, 1995); Terrence Ranger, *Voices from the Rocks: Nature, Culture and History in the Matopos Hills of Zimbabwe* (Oxford, James Currey, 1999); John M. MacKenzie, *Empire of Nature: Hunting Conservation and British Imperialism* (Manchester, Manchester University Press, 1988); and Roderick P. Neumann, "Moral and discursive geographies in the war for biodiversity in Africa", *Political Geography*, vol. 23, No. 7 (2004), pp. 813–837.

⁵William M. Adams, *Against Extinction: The Story of Conservation* (London, Earthscan, 2004); Philip Burnham, *Indian Country God's Country: Native Americans and the National Parks* (Washington, D.C., Island Press, 2000).

⁶For arguments in favour of legal trade and inquiries into its effectiveness, see, for example, Enrico Di Minin and Douglas MacMillan, "The ivory ban has made prices high and poaching lucrative" in "Debate: Would a legal ivory trade save elephants or speed up the massacre?", *The Guardian*, 1 October 2016; Erwin H. Bulte and Richard Damania, "An economic assessment of wildlife farming and conservation", *Conservation Biology*, vol. 19, No. 4 (2005): pp. 1222–1233; Timothy F. Wright and others, "Nest poaching in neotropical parrots", *Conservation Biology*, vol. 15, No. 3 (2001), pp. 710–720; Brendan Moyle, "Regulation, conservation and incentives" in *The Trade in Wildlife: Regulation for Conservation*, Sara Oldfield, ed. (London, Earthscan, 2003), pp. 41–51; and Jorge Rabinovich, "Parrots, precaution and project Elé: management in the face of multiple uncertainties" in *Biodiversity and the Precautionary Principle: Risk and Uncertainty in Conservation and Sustainable Use*, Rosie Cooney and Barney Dickson, eds. (London, Earthscan, 2005), pp. 173–188.

And indeed, under some circumstances, permitting legal trade has proved a highly effective conservation tool, at least for a while. Even the recovery of the white rhino in southern Africa throughout the 1990s was crucially underpinned by such market mechanisms.⁷ Allowing the legal trade of farmed crocodilians also resulted in the recovery in the wild of several crocodilian species.⁸

Yet allowing legal trade has not always produced such desirable conservation outcomes. Legal trade can, and often does, allow for the laundering of poached animals, such as in the case of Thailand, where the trade in ivory from domestic elephants is allowed, or through reptile breeding facilities in Indonesia. Moreover, permitting legal trade may also boost overall demand, including demand for poached animals and their products.

Many so-called critical conservationists, including some anthropologists, geographers, sociologists, political scientists and biologists, also oppose global bans. In particular, however, critical conservationists are opposed to policies that hurt poor marginalized populations.⁹ Thus, they reject policies that rely heavily on law enforcement and emphasize the historic injustice of colonial conservation policies under which native populations around the world were forcibly evicted from their lands. They lament what they see as the disproportionate and unfair power of international environmental NGOs that argue for bans and the establishment of protected areas that local communities are

⁷Nigel Leader-Williams, "Regulation and protection: successes and failures in rhinoceros conservation" in *The Trade in Wildlife*, Oldfield, ed., pp. 89–99; Michael 't Sas-Rolfes, "Assessing CITES: four case studies" in *Endangered Species: Threatened Convention: The Past, Present, and Future of CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora*, Jon Hutton and Barnabas Dikson, eds. (London, Earthscan, 2000), pp. 69–87; and Michael 't Sas-Rolfes, "The rhino poaching crisis: a market analysis" (February 2012).

⁸Jon Hutton and Grahame Webb, "Crocodiles: legal trade snaps back" in *The Trade in Wildlife*, Oldfield, ed., pp. 108–120; and Robert W.G. Jenkins and others, "Review of crocodile ranching programs", conducted for CITES by the Crocodile Specialist Group (January–April 2004).

⁹For arguments in favour of community-based natural resource management, see, for example, Dilys Roe, "Community-based natural resource management: an overview and definitions," in *CITES and CBNRM: Proceedings of an International Symposium on the Relevance of CBNRM to the Conservation and Sustainable Use of CITES-listed Species in Exporting Countries*, Max Abensperg-Traun, Dilys Roe and Colman O'Cioldain, eds. (London, 2011); Dilys Roe, Fred Nelson and Chris Sandbrook, eds. *Community Management of Natural Resources in Africa: Impact, Experiences and Future Directions* (London, International Institute for Environment and Development (IIED), 2009); William J. Adams and David Hulme, "Conservation and communities: changing narratives, policies and practices in African conservation" in *African Wildlife and African Livelihoods: The Promise and Performance of Community Conservation*, David Hulme and Marshall W. Murphree, eds. (Oxford, James Currey, 2001), pp. 9–23; William G. Moseley, "African evidence on the relation of poverty, time preference and the environment", *Ecological Economics*, vol. 38, No. 3 (2001), pp. 317–326; Izabella Koziell, *Diversity, not Adversity: Sustaining Livelihoods with Biodiversity*, Biodiversity and Livelihoods Issues, Paper (London, IIED, 2001); Krystyna Swiderska, *Integrating Local Values in Natural Resource Assessment: A Review of Assessment Tools*, (London, IIED, 2003); David Western and Michael Wright, eds., *Natural Connections: Perspectives in Community-based Conservation* (Washington, D.C., Island Press, 1994); Dan Brockington, Jim Igoe and Kai Schmidt-Soltau, "Conservation, human rights, and poverty reduction", *Conservation Biology*, vol. 20, No. 1 (2006), pp. 250–252.

prohibited to access for resources. They allege that environmental conservationism is swinging back to the inappropriate, discriminatory and force-based exclusion and marginalization from which it sought to depart in the 1990s.¹⁰ Not all critical conservationists endorse market-based mechanisms, i.e., legal trade, as an effective policy tool. Particularly those of neo-Marxist or post-modernist persuasion who see the market—as well as law enforcement—as another means to dispossess local communities.¹¹ Most critical conservationists, however, as well as some conservation biologists, call for approaches rooted in community-based natural resource management, under which local communities obtain the rights to local land and its wildlife and are empowered to make their own decisions regarding local resources.

But these policy disputes are about more than ideology or North-South divisions. Within the same country, different constituencies may support different policies, irrespective of whether the country is a supply, trans-shipment or demand country. Moreover, countries occupying the same place along that chain may take different approaches. Kenya and South Africa, for example, are both supply countries and both are experiencing massive poaching. They share colonial legacies of environmental conservation often rejected by local populations. Yet Kenya opposes legal trade in ivory and in 1977 banned all hunting with almost no exceptions, not even for subsistence hunting and hunting as a mechanism of community-based natural resource management. South Africa, on the other hand, has repeatedly lobbied for allowing the sale of its ivory and rhino horn stocks and has put in place economic incentives to conserve wildlife, including trophy hunting and trade in wildlife, which is a hallmark of its conservation policies.

In the wildlife trade and conservation domain, the debates revolve around the means to be used: are bans and enforcement the best way to ensure species survival and biodiversity, or should the market and legal trade be favoured? Which is the most effective level of decision-making when it comes to environmental policy, the State or local communities? Those debates are also

¹⁰ Wolfram H. Dressler and others, “From hope to crisis and back again? A critical history of the global CBNRM narrative”, *Environmental Conservation*, vol. 37, No. 1 (2010), pp. 5–15.

¹¹ Elizabeth Lunstrum, “Green militarization: anti-poaching efforts and the spatial contours of Kruger National Park”, *Annals of the Association of American Geographers*, vol. 104, No. 4 (2014), pp. 816–832; Rosaleen Duffy, “Waging a war to save biodiversity: the rise of militarized conservation”, *International Affairs*, vol. 90, No. 4 (2014), pp. 819–834; Alice B. Kelly and Megan Ybarra, “Introduction to the themed issue: ‘Green security in protected areas’”, *Geoforum*, vol. 69 (2016), pp. 171–175; Christopher Anthony Loperena, “Conservation by racialized dispossession: the making of an eco-Destination on Honduras’s north coast”, *Geoforum*, vol. 69 (2016), pp. 184–193; Nancy Lee Peluso and Peter Vandergeest, “Political ecologies of war and forests: counterinsurgency and the making of national natures”, *Annals of the Association of American Geographers*, vol. 101, No. 3, (2011), pp. 587–608; and Nancy Lee Peluso and Christian Lund, “New frontiers of land control: introduction”, *Journal of Peasant Studies*, vol. 38, No. 4 (2011), pp. 667–681.

about values. For some environmental NGOs, killing animals is unacceptable. As a counterargument, many advocates for local communities that have been hurt by conservation policies point out that this sentiment puts animals before people and compromise. Proponents of community-based natural resource management often argue that empowering local communities and promoting their economic development does not contradict environmental conservation. On the contrary, it advances it.

In some instances that may well be the case. But not necessarily in others. Not all local communities have an interest in conservation, and neither do all States and all industries. Some local populations and indigenous communities may wish to make money as quickly as possible with logging, with poaching and wildlife trafficking, or by converting forests into agricultural land. Even under those circumstances, maximalist proponents of community-based natural resource management hold that the local community should not be one of several environmental policy stakeholders, but the ultimate authority deciding how local natural resources are to be managed. Only in this way can it be ensured that the security, well-being and rights of the community are not ignored by globalist conservationists.

Policy outcomes

Beyond the anecdotes, what are the outcomes of the various policy approaches? The overall results are discouraging. Every approach—whether bans and interdiction, legalization and licensing, community-based natural resource management, demand reduction or anti-money-laundering—is limited by structural and resource constraints, and every approach has its downsides. All approaches have produced highly inconsistent outcomes, and this has confounded the search for the “right” policy.

Bans on hunting and local resource extraction can reduce the income and living standards of poor local populations. Coercive measures such as forced relocation can generate deep resentment and a rejection of conservation efforts among communities, as has often happened in Africa, Asia and Latin America. Legalizing trade, however, significantly complicates law enforcement and facilitates traffickers’ strategies of evasion. Also, a legal supply of a vulnerable species may boost demand, including for poached animals, and enable the laundering of illegally sourced products. On the positive side, licensing and regulation can give participants a stake in conservation that would otherwise be absent, which helps to protect not just a species but also its habitat and the broader ecosystem.

Community-based natural resource management can significantly motivate local communities to support conservation and resist poaching and trafficking, but just as with other tools, the outcomes have varied widely. Going after consumer demand is crucial, but demand-reduction measures are complex and take time. Anti-money-laundering efforts provide an additional tool, but they will not bankrupt the illegal wildlife trade.

Bans and law enforcement

Bans and intensified law enforcement can help in particular circumstances, depending on local cultural and institutional settings and the ecological requirements of the species in question. Wildlife policy enforcement is often inadequate because of its severe under-resourcing and the low priority it is given. A significant increase in diligence and resources is certainly warranted. But in the absence of a dramatic reduction in demand, there are limits to what even greatly intensified law enforcement can do to halt poaching and wildlife trafficking, create deterrence effects and suppress supply.

The purpose of prohibition and interdiction is to prevent, or at least restrict, the illegal supply of wildlife products and discourage their use. This is achieved by creating barriers to entry for both sellers and buyers, boosting prices, limiting commercialization and creating a normative set of values against threats to vulnerable wildlife ecologies. The fact that not every consumer or supplier is deterred by illegality does not automatically imply that legalization will reduce consumption and supply. Where consumption is driven by a desire to display status, power and wealth, such as by wearing ivory bangles or coats made from endangered species, a ban that discourages ostentatious display may well shrink demand and thus be highly valuable. However, the effect on demand will be very different for illegal bushmeat that is consumed not as an exotic luxury indulgence but for subsistence. Without alternative protein sources being made available, demand for bushmeat may not go down at all.

Effective interdiction is difficult and very resource-intensive. In order not just to incapacitate poachers and traffickers but, more importantly, to deter them, authorities need to have detailed knowledge of wildlife smuggling networks. The share of organized criminal and militant groups in poaching activities is at times overestimated. While they may be involved, their share in the poaching is often no more than a sliver of the total. There is a large degree of variation in the structures of poaching and trafficking networks, and many scattered low-level traders and poor poachers may be involved. Exaggerated and simplistic ideas about the situation divert the attention of policymakers away

from corrupt practices among lawful actors, including licensing entities, ecolodges and top-level environmental officials.

Poaching and trafficking networks are often far less vertically integrated than many interdiction advocates imagine. Moreover, even top-level traffickers and entire wildlife trafficking networks are easily replaceable as long as demand stays robust. Nonetheless, knowing the actual poaching and smuggling structures in a particular place, rather than imagining what they might look like, is crucial for making law enforcement and other policy interventions effective.

In the fight against drugs, even with its very large resources, the effectiveness of interdiction rarely exceeds 50 per cent, and often it is much lower. Such levels may be insufficient to prevent the collapse of certain species. Bans, interdiction and law enforcement are crucially facilitated by a reduction in demand—whether as a result of a ban, targeted demand reduction strategies or extraneous factors. At the same time, the more effective law enforcement becomes, the more a smuggled animal or wildlife product goes up in value. Perceived scarcity—whether as a result of species depletion or more effective law enforcement—increases the financial benefits of smuggling.

Drug traffickers expect large losses caused by the eradication of illegal crops and the interdiction of smuggled drugs. They often welcome such actions, because they boost prices and make stockpiles more profitable. Some wildlife traffickers make similar calculations: traffickers of rare parrots from Indonesia, for example, at one time fully expected a 90 to 95 per cent mortality of the parrots they illegally collected as a result of their smuggling method. They avoided detection by law enforcement by stuffing the parrots into plastic bottles, throwing them into the sea and retrieving them on open water.¹² The fact that less than 10 per cent survived was not a deterrent, as profits on the remaining specimens were more than sufficient.

In fact, scarcity can boost prices to such an extent that absorbing huge losses and driving a species to extinction is highly profitable and attractive for traffickers. The rarer the species, the greater its value. If demand is stable, “effective” interdiction paradoxically stimulates more poaching. Even more pernicious are rarity markets, where demand increases with rarity and price. This can have a devastating effect on the species involved. In other words, seemingly effective interdiction can, in fact, be outright counterproductive.

¹²Vanda Felbab-Brown, “Indonesia field report IV: the last twitch? Wildlife trafficking, illegal fishing, and lessons from anti-Piracy efforts”, Brookings Institution, 26 March 2013.

Legal trade and licensing

Allowing a supply of animals, plants and wildlife products to enter the market legally is equally fraught with dilemmas and imperfect outcomes. The arguments for legalizing drugs are substantially different from those in favour of legalizing the trade in wildlife products. Critics of drug prohibition argue that, since drugs cannot be eliminated from the world, criminalizing drugs overburdens law enforcement and justice systems, empowers criminal groups, severely undermines human rights, compromises public health and undercuts efforts to combat militant groups. Advocates of legalization promise that it will raise revenue for the State in the form of taxes and license fees, and that it will undo the negative effects of drug prohibition. Yet many critics of drug prohibition dispute the notion that legalization will undo all the negative effects. They do not necessarily support outright legalization, preferring decriminalization and differently designed enforcement measures instead. The extent to which legalization will increase problematic drug use and drug addiction is also disputed.

The regulatory arguments for permitting wildlife trade are fundamentally different. First, farming or ranching protected species can take the pressure off specimens living in the wild. Second, allowing some level of trade can give hunters, ranchers and others close to traded wildlife resources a stake in preserving and sustainably managing species and entire ecosystems. Third, regulated trade can raise money for conservation.

But just as with bans, the effectiveness of licensing, ecolabeling and creating a legal supply depends on the capacity of law enforcement bodies to monitor and enforce the regulations and restrictions in all the countries involved. In addition, their success depends on whether consumers are willing to favour legally and sustainably produced items and able to distinguish genuine labels from fake ones.

As with bans, many of the presumed or hoped-for positive outcomes of legalizing trade do not fully materialize. A legal supply does not guarantee sustainability, nor does it necessarily take pressure off the animals living in the wild. If legally obtained items are expensive (because heavy taxes are imposed to discourage demand) and difficult to produce (because it is difficult to breed animals in captivity), then poaching will likely persist. Breeding in captivity and licensing schemes often do not prevent the leakage of illegally caught wildlife into the supposedly legal supply chain. Frequently, neither customers nor law enforcement officials are able or even motivated to determine whether a wildlife product was obtained from a breeding facility or in the wild, and whether the supplier is legitimate. Permitting a legal supply greatly increases

the burden on law enforcement to differentiate between legally and illegally sourced products. However, while total bans on wildlife trade do away with that burden, they do not necessarily reduce the overall resource requirements. Having a legal supply can also reduce moral opprobrium surrounding the trade in particular species, thus inadvertently boosting demand for illegally sourced wildlife and whitewashing consumers.

Moreover, revenue from the lawful trade in wildlife products, such as generated by breeding facilities or trophy hunting operations, does not necessarily end up with local stakeholders and communities. Other actors, such as local or national elites, large ecobusinesses and distant breeding facilities can capture revenue through corruption, problematic regulatory redesign or natural market dynamics. Local stakeholders may not benefit from conservation as a result.

Even though some currently claim that poaching networks are highly organized criminal enterprises, many poachers are in fact members of marginalized and desperately poor local communities. Sometimes their poaching activities are fully separate from wildlife trafficking. In other instances, they may supply global trafficking networks with animals or work for them as hunters, carriers, trackers and spotters in the same way some corrupt park rangers sometimes do. An important component of policies to reduce the illegal trade in wildlife may therefore be to find alternative, legal livelihoods for local communities and thereby incentivize them to resist wildlife trafficking. Although that does not address the problem of wildlife smugglers and organized criminal groups, it can simplify and focus law enforcement efforts. It can encourage community cooperation with law enforcement bodies, enhance the political sustainability of restrictions on wildlife trade and reduce political conflict.

Involving local communities: alternative livelihoods and community-based natural resource management

Generating economic incentives for the poor to support conservation policies is also important normatively, because marginalized communities that depend on hunting for their basic livelihoods have often suffered greatly as a result of environmental conservation. They have been forced off their land in areas designated as protected and their livelihoods and human security have been compromised.

Laws and regulations are easiest to enforce when the vast majority of the population accepts them as legitimate and internalizes them. Hence the devolution of decision-making power to those who have been poor, marginalized

and without rights may be not only politically and economically beneficial, it can be psychologically rewarding and enabling as well.

Yet many alternative livelihood schemes have not been effective. Ecotourism, while frequently prescribed as a mechanism for conservation, has failed both as a consistent remedy against poaching and wildlife trafficking and as a reliable way to achieve economic growth. It rarely generates sufficient income and jobs because of its own internal limitations and because the resources it generates are captured by elites. A crucial objective, namely to let communities earn enough from ecotourism to maintain their prior subsistence levels, often remains elusive, let alone that it lets communities achieve economic and social advancement. The same is true for other alternative livelihoods and for allowing the limited hunting of wildlife.

On the island of Seram in Indonesia, for example, 20 poachers of rare parrots were offered alternative livelihoods by converting them into rescue centre staff and wildlife guides for ecotourists through the work of Profauna, one of Indonesia's NGOs most determined to fight against the illegal wildlife trade. As a result, poaching dramatically declined. To ensure a steady flow of ecotourists, birdwatchers from the United States of America were encouraged to travel to Seram and visit the rescue centre. However, after some time the supply of international visitors declined. The former poachers' income from wildlife guiding shrank and once more they were under pressure to resume illegal hunting.¹³

The Seram story is a micro-example of the conditions on which successful alternative livelihoods depend. If poor poachers are offered an income from other sources, they are often willing to abandon poaching, even if poaching brings more money. But the income needs to be steady and assured. The problem with many ecotourism schemes is that the income tends to be sporadic and seasonal and fluctuates greatly.

For an area to draw enough ecotourists to generate income, it often needs to have a population of large and fairly easily visible mammals. For example, East Africa's savannahs tend to attract many more tourists than rainforests do. Even so, income from ecotourism in East Africa can be highly seasonal. Owners of lodges either have to build financial reserves to pay staff during the low season or, as is frequently done, dismiss staff for part of the year, thus antagonizing the community.¹⁴ Parks need to have good infrastructure such as

¹³ V. Felbab-Brown, "Indonesia Field Report IV".

¹⁴ Author's interviews with lodge owners at Tsavo National Park and Masai Mara, Kenya, in May 2013, and in Serengeti National Park and Ngorongoro Conservation Area, United Republic of Tanzania, in 2003.

airports, roads and lodges, as well as good security, all of which require resources. Meanwhile, bandits and militant groups scare off tourists, as do external shocks such as political instability or economic downturns in tourists' home countries.

The number of jobs available in ecotourism may be significantly lower than the pool of potential poachers. Even if all existing poachers get legal jobs, there may well be other poor people who can be recruited as poachers in the area or who can move into the area, especially if the material rewards for poaching increase.

The effectiveness of alternative livelihoods and local community involvement in managing habitats and wildlife varies greatly. Some outcomes reveal the detrimental effects of allowing, or of not allowing, local communities to exist in national parks. Many factors can affect these outcomes, such as a community's short-term versus its long-term economic horizons, its income and employment levels, its attitudes towards nature, its cohesion and leadership structures, and the enforcement of property rights. Alternative livelihoods that address all the structural drivers of illicit economies have the highest chance of being effective.

Community-based natural resource management schemes often go beyond alternative livelihoods, ecotourism, compensation or limited hunting. They are intended to transfer rights to local communities and achieve three objectives: political empowerment, poverty alleviation and environmental protection. They can be based on trophy hunting, ecotourism or other alternative livelihoods. Sometimes they work spectacularly well, but the outcomes have not been uniform. Other than on proper implementation, their success is dependent on a steady and large flow of tourists, trophy hunters and customers, and sufficiently low densities of people compared to wildlife. In general, such schemes have worked better in arid areas where agriculture is not profitable but iconic wildlife species are present, rather than in fertile areas where converting land to agricultural use is profitable, or in tropical forests, where animals are difficult to see and industrial logging brings far greater revenues than ecotourism. In some cases, after becoming richer as a result of community-based natural resource management policies, communities have intensified their unsustainable hunting and logging to further augment their economic resources at the expense of environmental conservation.

In short, there are no silver bullets, nor even universally appropriate ways to improve the situation. Policy outcomes are highly context-specific and contingent. All strategies face structural and resource constraints. In addition to these limitations, the strategies also come with direct downsides. Bans on

hunting and local resource extraction can restrict sources of income and lower the standard of living among poor local populations. The imposed relocation of communities and other coercive measures can generate deep resentment and a rejection of conservation, as has often happened in Africa, Asia and Latin America. Licensing legal trade, however, significantly complicates law enforcement and facilitates traffickers' strategies of evasion.

Bans or licensing can help, depending on local cultural and institutional settings and the ecological requirements and circumstances of particular species. But there are limits to how much even greatly intensified law enforcement can achieve to halt poaching and wildlife trafficking, create deterrence effects and suppress supply in the absence of a dramatic reduction in demand. Licensing and regulating the hunting and wildlife trade only works under certain circumstances. In some instances it gives certain parties a stake in conservation they would not have otherwise, which serves to protect not just a species but also its habitat and the broader ecosystem. In other instances, the legal supply of products from a vulnerable species boosts overall demand, including for poached animals, which complicates enforcement and enables the laundering of illegally sourced products. Community-based natural resource management can significantly motivate local communities to support conservation and resist poaching and trafficking, but as with other conservation tools, the outcomes have varied widely. Targeting consumer demand is crucial, but demand reduction measures are complex and take time. Anti-money-laundering efforts provide an additional tool, but they will not bankrupt the illegal wildlife trade.

Policy recommendations

With the above considerations in mind, some recommendations can be made on ways to cope with the most prominent wildlife problems the world is facing today.

Given the increasing threat wildlife trafficking poses to the survival of vulnerable species, and given the current scale of elephant poaching, China should fulfil its promise to close down its ivory market, and should do so as soon as possible, by implementing enforcement measures to interdict and discourage the buying, selling and trafficking of ivory. Other countries, such as Japan, should do the same. South Africa and other countries should not be given licenses to sell either ivory or rhino horn until both demand and poaching significantly decline and better monitoring and enforcement structures are in place in supply and demand countries.

However, while declaring the ivory market illegal in China, including Hong Kong, makes sense in the current context of massive ivory laundering, the overall policy lesson is not, and should not be, that all legal sales of wildlife must be ended. If demand levels off and law enforcement is tightened so that significantly less illegally sourced products leak into the legal supply chain, then serious consideration should again be given to permitting a tightly controlled legal supply in both ivory and rhino horn. Providing economic incentives for conservation to as many stakeholders as possible greatly facilitates wildlife regulation enforcement.

Allowing sustainable hunting, even of endangered species, should be the preferred policy so that local stakeholders have a material interest in promoting conservation. Yet, when corruption, law evasion and the laundering of wildlife products are pervasive, policymakers must be willing to move to temporary and locale-specific bans, and sometimes even outright blanket bans, for specific species. Any policy will need to be re-evaluated and changed if its outcomes are not positive.

Hunting can be sustainable and can benefit the environment, for instance by keeping overpopulated species in check. This is particularly so if the numbers of keystone predator species are down, whether as a result of poaching, habitat destruction or other causes. Poaching and unsustainable hunting of apex predators is particularly problematic as it has large-scale repercussions throughout an ecosystem. Not all poaching threatens the survival and health of a species, and neither does all legal trade. Thus, in buffer zones and even in core parts of protected areas, it makes good sense to allow limited hunting of non-endangered species and the limited sustainable extraction of natural resources to mitigate the food insecurity and income losses of poor local communities. It is crucial to assess case by case what type of hunting is sustainable at what levels. As the impact of limited exploitation may change over time, wildlife populations and ecosystems need to be monitored carefully and the situation needs to be reassessed regularly.

Whenever possible, local communities should be given rights to land in conservation areas and to the proceeds from sustainable wildlife utilization. Marginalized communities should receive assistance to secure their rights and should have a strong voice in the determination of land use and protection to achieve environmental equity and sustainability. The rights thus conferred should be limited, with restrictions on use to ensure the preservation of biodiversity; communities should not be allowed to destroy valuable biodiversity areas. This does not preclude sustainable logging or the hunting of non-endangered species either for subsistence or trophy hunting, or of limited grazing in protected areas.

Such conditional rights should also include the community's entitlement to 100 per cent of the revenues derived from sustainable wildlife management. However, such revenues should be taxed. Thus, external government support for local community efforts can be established and the State may have fewer incentives to collude in poaching and deforestation by outsiders or leave the community to fend for itself when other actors, such as wildlife traffickers or the logging industry, threaten its resources. All such arrangements need to be monitored and reassessed on a regular basis, with a strong input from local communities.

If allowing the exploitation of environmentally significant areas by local communities results in a substantial degradation of ecosystems, then resettlement may well be necessary, provided that the population is properly consulted and compensated. At a minimum, compensation must be such that the local community is no worse off economically than when it lived in the protected area. Ideally, the compensation should also reduce poverty. That means, however, that proponents of exclusive protected areas must help in raising money to offset the consequences of resettlement, or of placing restrictions on land use for that matter. Conditional cash transfers should become a standard tool in the conservation policy toolbox, especially in circumstances where legal trade in a species is not a viable option and ecotourism or other alternative livelihoods simply cannot offset the benefits foregone by not converting ecosystems into agricultural land or hunting threatened species.

Effective monitoring and law enforcement is crucial for the success of any of the tools analysed. Strengthening law enforcement and reducing corruption among law enforcement agencies is critical. At the same time, human rights abuses should never be tolerated, and no agency should adopt such reprehensible and ineffective policies as shooting poachers on sight. In situ law enforcement is by far the most effective way to prevent poaching. Efforts to dismantle wildlife trafficking networks should focus on apprehending as much of their middle operational layers in one sweep as possible. This minimizes their capacity to regenerate and is far more effective than arresting kingpins (as morally desirable as that may be) or flooding prisons with low-level poachers. Interdiction needs to be carefully designed so that greater seizures do not lead to greater poaching. That is why in situ law enforcement and targeting of middlemen, as opposed to en route seizures, is so important.

Finally, retail markets and consumer demand need to be reshaped with the help of persuasion campaigns, text messaging campaigns and enforcement. Penalties should differentiate between low-level buyers of, for example, ivory statues on one hand, and speculators and heavy users of prohibited wildlife products on the other. While emotionalism and ideological commitments

should not cloud judgments about policy efficacy, minimizing avoidable harm, such as unnecessary cruelty towards animals or humans, should be an essential criterion in the choice of conservation policies.

Perhaps the most important finding is that we must expect huge variations in policy outcomes. This is true for wildlife policy as it is for drug policy. What works well for a species in one locale may not work well for the very same species in a neighbouring locale. What works well to suppress demand at a given time may not work 10 years later. To what extent a legal or illegal market can be shaped or reduced in size through supply and demand measures depends on its elasticity, which can change over time, as well as a host of other factors, such as local institutional and cultural settings. Therefore, policy should allow for experimentation.

THE LACEY ACT AS A MODEL FOR WILDLIFE TRADE LEGISLATION

Lydia Slobodian* and Ariadni Chatziantoniou**

Abstract

How can and should the trade in wildlife be regulated? In this article, a group of legal researchers take a closer look at the United States Lacey Act. This legislation prohibits the possession of wildlife that has been illegally harvested in, or illegally traded from, anywhere in the world, and it has been viewed by some observers as a potential model for other countries. Analysing the Lacey Act from an international perspective, the authors explore implications of this law and the possibility that other countries could adapt it for their own legal systems, concluding that it does have the potential to be used as a model for legislation in different jurisdictions.

Keywords: legislation, Lacey Act, wildlife trade, United States

Introduction

In the mid-nineteenth century, the skies of the United States were frequently darkened by birds, perhaps the most numerous birds in the world: passenger pigeons. Flocks of pigeons blocked the sun for hours as they passed, making a sound like thunder that drowned conversation. Half a century later, they were extinct. The passenger pigeon fell victim to a new type of threat enabled by a growing network of railways; out-of-state visitors arrived by train, killed birds by the thousands, then departed with their trophies. Coupled with local hunting and habitat destruction, the interstate pigeon industry wreaked havoc on a species considered too abundant to fail and inspired a new form of legislative protection. In 1900, Republican Congressman John F. Lacey, addressing the United States House of Representatives, spoke about the extinction of the passenger pigeon. “We have given an awful exhibition of slaughter and destruction, which may serve as a warning to all mankind,” he said. “Let us now give an example of wise conservation

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of what remains of the gifts of nature”.¹ The law he introduced, the Lacey Act, was to become one of the most well-known and effective United States legal tools to combat wildlife crime, and a potential model for legislation in the rest of the world.²

Ever since Representative Lacey built his argument around the plight of the pigeon, the context of wildlife trade has changed. The illegal trade in wildlife has grown into a multibillion-dollar business that covers a range of industries and markets.³ The *World Wildlife Crime Report: Trafficking in Protected Species* (2016) of the United Nations Office on Drugs and Crime (UNODC) counted 7,000 different species in more than 164,000 seizures involving 120 countries.⁴ The report exposed the fact that wildlife crime involves a large variety of markets and industries, including those of fashion, cosmetics, furniture, food and pets. Often, illegally sourced products are used or traded by otherwise legitimate business operations, making it harder to detect them as products of wildlife crime.⁵ As the scope and nature of wildlife crime has grown and changed, the Lacey Act has developed accordingly through a series of amendments expanding its coverage and increasing penalties.⁶ The Act is aimed not only at conserving species, but also at protecting the competitiveness of legitimate United States businesses, the supply of natural resources to United States and global markets, United States consumers who unwittingly buy illegal goods, United States national security and environmental victims both in the United States and abroad.⁷

In recent times, the Lacey Act has received increasing attention from the international community. In discussing the policy implications of the research findings of the *World Wildlife Crime Report*, the authors noted that:

¹ Barry Yeoman, “Why the Passenger Pigeon Went Extinct”, *Audubon*, May–June 2014.

² Robert S. Anderson, “The Lacey Act: America’s Premier Weapon in the Fight against Unlawful Wildlife Trafficking”, *Public Land and Resources Law Review*, vol. 16 (1995), p. 29.

³ United States, Fish and Wildlife Service, International Affairs, “Illegal wildlife trade”. Available at www.fws.gov/; World Wide Fund for Nature, “Illegal wildlife trade”. Available at www.worldwildlife.org/; TRAFFIC: wildlife trade monitoring network, “Legal wildlife trade”. Available at www.traffic.org/trade.

⁴ *World Wildlife Crime Report: Trafficking in Protected Species*, 2016 (United Nations publication, Sales No. E.16.XI.9), p. 3.

⁵ *Ibid.*

⁶ Lacey Act of 1900, amended in 2008, United States Code, Title 16, sects. 3371–3378; Anderson, “The Lacey Act”, p. 29.

⁷ United States, House of Representatives Committee on the Judiciary Over-Criminalization Task Force, “Statement for the Record by Marcus Asner and Katherine Ghilain: Regulatory Crime—Solutions”, 14 November 2013; United States, Government Publishing Office, “Testimony of Marcus Asner” in *Oversight Hearing on The 2008 Lacey Act Amendments Part 1 and 2*, Serial No. 113-16, 16 May 2013, pp. 57–65.

Illegal trade could be reduced if each country were to prohibit, under national law, the possession of wildlife that was illegally harvested in, or illegally traded from, anywhere else in the world.

Further examination of the Lacey Act's potential has been recommended by the Task Force on Illegal, Unreported and Unregulated Fishing of the Organization for Economic Cooperation and Development and the joint UNODC/World Wide Fund for Nature (WWF) Expert Group Meeting on Fisheries Crime, and is mentioned in a resolution on crimes against the environment adopted at the World Conservation Congress of the International Union for Conservation of Nature.⁸

The present article provides some initial thoughts on the functioning of the Lacey Act and its potential to serve as a model for legislation in other parts of the world. The first section gives a basic overview of key provisions of the Act. The second compares the Act with approaches in other countries, in particular the Wildlife Trade Regulations and Timber Regulation of the European Union and the Illegal Logging Prohibition Act of Australia. The subsequent sections offer cases, examples and arguments from different sectors to highlight various aspects of the Act, how it works in practice and how it is perceived. The final section includes ideas about the potential of the Lacey Act as a model for other jurisdictions, and next steps.

Key provisions: tools for combating the illegal trade in wildlife

The Lacey Act prohibits a wide range of conduct in relation to trafficking in illegally sourced wildlife and wildlife products. It provides not only for trafficking offences, but also for marking and false labelling offences, as well as for specific declarations for plants. It creates both civil and criminal penalties dependent on violators' knowledge and mental state, and provides for permit sanctions and forfeiture.

Wildlife trafficking offences

Trafficking offences under the Lacey Act are composed of two distinct components (see box 1). First, the prosecuting authorities must prove that the

⁸High Seas Task Force and others, *Closing the Net: Stopping Illegal Fishing on the High Seas—Final Report of the Ministerially-led Task Force on the Illegal, Unreported and Unregulated Fishing on High Seas* (London, 2006), p. 16; United Nations Office on Drugs and Crime, "Transnational crime in the fisheries sector tackled by global experts", 29 February 2016; International Union for Conservation of Nature, "Crimes against the environment" (WCC-2016-Res-070).

wildlife, fish or plant in question was taken, possessed, transported or sold in violation of an underlying federal, tribal, state or foreign law or regulation. Then, the prosecuting authorities must prove that the defendant committed or attempted to commit one of the prohibited acts listed in the Lacey Act, which includes the import, export, transport, sale, receipt, acquisition or purchase of illegal wildlife, or the possession of illegally taken wildlife, fish or plants within the “special maritime and territorial jurisdiction of the United States” (sect. 3372 (a)).⁹

At face value, the Lacey Act appears to have an unlimited scope in terms of predicate offences. However, successive case law and congressional discussion has clarified that the underlying law must clearly relate to wildlife.¹⁰ The amendments of 2008 establishing offences relating to plants provide a clear and specific list of predicate offences, all of which relate to conservation, whether directly or indirectly (sect. 3372 (a) (2) (B) and (3) (B)).¹¹ The list includes predicate offences such as failure to pay royalties, taxes or stumpage fees, and violation of any law related to export or trans-shipment. These offences may seem less relevant to conservation objectives, but they provide an important tool for catching criminals who evade taxes and falsify export forms to cover up other illegal activities.

It is worth noting that the Lacey Act criminalizes the *attempt* to commit illegal acts as well as the acts themselves (sect. 3372 (a) (4)). Under a related provision of United States criminal law, conspiracy to commit any offence is also punishable by fine or imprisonment (United States Code, Title 18, sect. 371). In the context of the extensive criminal networks involved in modern wildlife trafficking, one often encounters behaviour that fits the definition of conspiracy. Prosecutors have used conspiracy charges in combination with violations under the Lacey Act to obtain a higher sanction than that possible under the Lacey Act alone (see the discussion on the *United States v. Bengis* case below).

⁹In the case of a violation of state or foreign law, sect. 3372 (a) (2) specifies that the import, export, transport, sale, receipt, acquisition and purchase of illegal wildlife is prohibited only if interstate or foreign commerce is involved. The “special maritime and territorial jurisdiction of the United States” mainly comprises the high seas, territorial waters, federal property and United States vessels (United States Code, Title 18, sect. 7).

¹⁰United States Court of Appeals, Ninth Circuit, *United States v. Lee*, 937 F. 2d 1388 (1991), at 1392, citing Senate Report No. 97-123, reprinted in *United States Code Congressional and Administrative News* (1981), 1748, 1753.

¹¹For details of the discussion on the scope of predicate offences, see testimony of Marcus Asner, *Overight Hearing on “Why should Americans have to comply with the laws of foreign nations?”*, 17 July 2013, p. 9; Pervaze A. Sheikh, “The Lacey Act: compliance issues related to importing plants and plant products”, *Congressional Research Service Report R42119* (24 July 2012), p. 11.

Box 1. Trafficking offences under the Lacey Act

United States Code, Title 16, sect. 3372 (a)

It is unlawful for any person—

- (1) To import, export, transport, sell, receive, acquire, or purchase any fish or wildlife or plant taken, possessed, transported, or sold in violation of any law, treaty, or regulation of the United States or in violation of any Indian tribal law;
- (2) To import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce—
 - (A) Any fish or wildlife taken, possessed, transported, or sold in violation of any law or regulation of any State or in violation of any foreign law;
 - (B) Any plant—
 - (i) Taken, possessed, transported, or sold in violation of any law or regulation of any State, or any foreign law, that protects plants or that regulates—
 - (I) The theft of plants;
 - (II) The taking of plants from a park, forest reserve, or other officially protected area;
 - (III) The taking of plants from an officially designated area; or
 - (IV) The taking of plants without, or contrary to, required authorization;
 - (ii) Taken, possessed, transported, or sold without the payment of appropriate royalties, taxes, or stumpage fees required for the plant by any law or regulation of any State or any foreign law; or
 - (iii) Taken, possessed, transported, or sold in violation of any limitation under any law or regulation of any State, or under any foreign law, governing the export or trans-shipment of plants; or
 - (C) Any prohibited wildlife species (subject to subsection (e) of this section);
- (3) Within the special maritime and territorial jurisdiction of the United States (as defined in section 7 of title 18)—
 - (A) To possess any fish or wildlife taken, possessed, transported, or sold in violation of any law or regulation of any State or in violation of any foreign law or Indian tribal law, or
 - (B) To possess any plant—
 - (i) Taken, possessed, transported, or sold in violation of any law or regulation of any State, or any foreign law, that protects plants or that regulates—
 - (I) The theft of plants;
 - (II) The taking of plants from a park, forest reserve, or other officially protected area;

Box 1. Trafficking offences under the Lacey Act (*continued*)

- (III) The taking of plants from an officially designated area; or
- (IV) The taking of plants without, or contrary to, required authorization;
 - (ii) Taken, possessed, transported, or sold without the payment of appropriate royalties, taxes, or stumpage fees required for the plant by any law or regulation of any State or any foreign law; or
 - (iii) Taken, possessed, transported, or sold in violation of any limitation under any law or regulation of any State, or under any foreign law, governing the export or trans-shipment of plants.
- (4) To attempt to commit any act described in paragraphs (1) through (3).

Marking, false labelling and plant declaration offences

The Lacey Act makes it unlawful to import, export or transport in interstate commerce a package containing fish or wildlife that is not plainly marked.¹² The amendments of 2008 added the requirement for importers to submit a plant declaration showing the scientific name, value, quantity and origin of any plant or plant product.¹³ The Act prohibits making or submitting false records or labels for any fish, wildlife or plant that has been or is intended to be imported, exported, transported, sold, purchased or received.¹⁴

The marking and labelling requirements have been criticized as difficult to monitor and enforce, given the scope of wildlife (including fish and plant) products to which they apply. In practice, the provisions serve as useful tools to catch wildlife traffickers, who regularly commit marking and declaration offences to evade authorities.

Penalties and mental state

Penalties under the Lacey Act largely depend on the operator's mental state. The highest criminal penalties are reserved for so-called "knowing" violations. With regard to trafficking offences, this means the prosecuting

¹²United States Code, Title 16, chap. 53, sect. 3372 (B); Unites States Code of Federal Regulations, Title 50, chap. I, subchap. B, part 14, subpart H, sects. 14.81–14.82.

¹³United States Code, Title 16, sect. 3372 (f). For a description of the procedure for submitting plant declarations, see United States, Department of Agriculture, Animal and Plant Health Inspection Service, "Lacey Act: frequently asked questions", 28 April 2016.

¹⁴United States Code, Title 16, sect. 3372 (d).

authorities must show that the actor knew that the wildlife was taken, possessed, transported or sold in violation of an underlying law, and that he or she knowingly did, or attempted to, import, export, transport, sell, receive or purchase the illegal wildlife.¹⁵ Timber importers who know that the timber they are importing was harvested illegally can be liable under these provisions, even if they were not themselves involved in the illegal harvest. Knowing violations are deemed felonies and carry an imprisonment penalty of up to five years and a fine of up to \$250,000 for individuals or \$500,000 for organizations.¹⁶ Alternatively, fines can be imposed for up to twice the greater of the gross gain or loss derived from the offence.¹⁷

Misdemeanour penalties and certain civil fines hinge upon the standard of due care. They do not require proof that the actor *actually* knew that the wildlife was illegal, only that the actor *should have known*, had he or she been exercising due care. For trafficking offences, where the actor should have known of the illegal origin of the wildlife product yet still engaged in prohibited conduct (such as import, export, transport or sale, etc.), he or she may be subject to a civil fine of up to \$10,000, or a misdemeanour penalty of up to one year in prison or a fine of up to \$100,000 (\$200,000 for organizations).¹⁸ The exact definition of due care and how it should be applied is one of the more difficult and controversial aspects of the Lacey Act, and is discussed further in the section on due diligence and due care below.

Some civil fines under the Lacey Act apply on a strict liability basis, meaning that they do not depend on proof of intent. For example, any person who violates the marking requirements may be subject to a civil penalty of up to \$250.¹⁹

Other sanctions

In addition to fines and imprisonment, the Lacey Act provides for permit sanctions or forfeiture in the case of violation of almost any of its provisions. In some cases, restitution is also possible.

¹⁵United States Code, Title 16, sect. 3373 (d) (1) (B) to (d) (2).

¹⁶United States Code, Title 16, sect. 3373 (d) (1) (B) to (d) (2) read with title 18, sect. 3559 (a) (5) and sect. 3571 (b) (3) and (c) (3). For offences other than import or export offences, the market value of the wildlife must be greater than \$350 for it to be deemed a felony. The same penalties may also apply to knowing violations of false labelling provisions

¹⁷United States Code, Title 16, sect. 3373 (d) (1) (A), read together with title 18, sect. 3559 (a) (5) and sect. 3571 (c) (3) and (d).

¹⁸United States Code, Title 16, sect. 3373 (a) (1) and (d) (2), read together with title 18, sect. 3559 (a) (6) and sect. 3571 (b) (5) and (c) (5). In the alternative, the actor may be fined up to the greater of twice the gross gain/loss pursuant to title 18, sect. 3571 (d).

¹⁹United States Code, Title 16, sect. 3373 (a) (2).

Permits related to the import and export of wildlife, fish and plants, as well as hunting and fishing licenses, may be suspended, modified or cancelled if the holder is convicted of any criminal violation under the Lacey Act.²⁰

The Lacey Act also provides for the forfeiture of fish, wildlife and plants involved in trafficking and false labelling offences without requiring proof that the operator knew they were illegally sourced or even that he or she failed to exercise due care.²¹

All vessels, vehicles, aircraft and other equipment used to facilitate illegal trafficking may also be subject to forfeiture, subject to certain conditions: first, that the owner of the equipment knew or should have known at the time the unlawful act was committed that it would be used in a criminal violation of the Lacey Act, and second, that the owner is convicted of a felony involving the actual or intended sale or purchase of fish, wildlife or plants.²²

The Lacey Act itself does not provide for restitution. However, many cases involving the Lacey Act also involve charges of conspiracy or smuggling, under provisions set out in United States Code, Title 18, sections 371 and 545. For those crimes, restitution is mandatory (for an example, see the discussion on the *United States v. Bengis* case below).

The Act's provisions on forfeiture, restitution and, to a lesser extent, revocation of permits and licences provide an important means to increase the cost of illegal wildlife trafficking, and therefore change the criminal operator's cost-benefit equation.²³ The forfeiture provisions are not unusual—in many countries and circumstances it is illegal to possess contraband—and they are effective in denying criminals not only the proceeds of crime but also the means of carrying it out.

Lacey Act-type approaches in other countries

The mechanism provided for under the Lacey Act—prohibiting conduct involving materials sourced in contravention of another country's laws—is

²⁰ *Ibid.*, sect. 3373 (e). The provision specifically exempts permits issued under the Magnuson-Stevens Fishery Conservation and Management Act.

²¹ United States Code, Title 16, sect. 3374 (a) (1).

²² *Ibid.*, sect. 3374 (a) (2).

²³ See Marcus Asner, "To catch a wildlife thief: strategies and suggestions for the fight against illegal wildlife trafficking", *University of Pennsylvania Asian Law Review*, vol. 12, No. 1, art. 2 (2017), p. 18.

not entirely unique. Although it may be the most comprehensive example of its kind, similar legal instruments have been adopted by other countries around the world.

Some States have adopted regulations on imports similar to those provided for under the Lacey Act. For example, Canada prohibits the import of any animal or plant that was taken, or any animal or plant, or any part or derivative of an animal or plant, that was possessed, distributed or transported in contravention of any law of any foreign state.²⁴ Australia prohibits the intentional import of an animal or plant specimen if the importing person knows that the specimen was exported from a foreign country in violation of that country's legislation.²⁵ Neither piece of legislation contains provisions on transport, sale, receipt or purchase.

The European Union Wildlife Trade Regulations, which serve to implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) within the European Union, set out a system to govern trade in endangered species. They provide for import and export permits and penalties for trade carried out using falsified or invalid certificates. Unlike the Lacey Act, which applies to a broad range of species, the requirements under the European Union regulations are largely limited to the species listed in the four annexes to Council Regulation No. 338/97.²⁶

Lacey Act-type legislation has been championed as a means to combat illegal fishing.²⁷ Several States, such as Australia, New Zealand and Norway, have extended their criminal jurisdiction to prohibit their nationals from illegally harvesting marine resources in foreign waters.²⁸ Other countries, such as

²⁴ Canada, Consolidated Acts, *Statutes of Canada*, Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (1992), art. 6.1.

²⁵ Australia, Environment Protection and Biodiversity Conservation Act 1999, No. 91 (1999), *Compilation No. 51*, vol. 2, chap. 5, part 13A, Division 6, art. 303GQ (1 July 2016).

²⁶ See the European Union Wildlife Trade Regulations: Council of the European Union Regulation No. 338/97 of 9 December 1996, on the protection of species of wild fauna and flora by regulating trade therein; Commission of the European Communities Regulation No. 865/2006 of 4 May 2006, laying down detailed rules concerning the implementation of Council Regulation No. 338/97; and Commission of the European Union Implementing Regulation No. 792/2012 of 23 August 2012, laying down rules for the design of permits, certificates and other documents provided for in Council Regulation No. 338/97 and Commission Regulation No. 865/2006.

²⁷ *Closing the Net*; "Transnational crime in the fisheries sector"; Blaise Kuemlangan, "National legislative options to combat IUU fishing", in *Report of Papers Presented at the Expert Consultation on Illegal, Unreported and Unregulated Fishing*, Australia, 15–19 May 2000, Food and Agriculture Organization of the United Nations (FAO) *Fisheries Report No. 666* (Rome, FAO, 2001), p. 174; see also Gregory Rose and Martin Tsamenyi, "Universalizing jurisdiction over marine living resources crimes: executive summary and recommendations"—a report for World Wide Fund for Nature (WWF) International (Gland, Switzerland, WWF, 2013), p. 60.

²⁸ Rose and Tsamenyi, "Universalizing jurisdiction over marine living resources crimes", pp. 57–58.

Nauru, Papua New Guinea and Solomon Islands, have followed the Lacey Act model and prohibited the import of illegally harvested marine living resources.²⁹ The European Union adopted European Commission Regulation 1005/2008, establishing sanctions for nationals of European Union member States who engage in or support fishing activities in contravention of the conservation and management measures adopted by a regional fisheries management organization or in violation of national laws or international obligations.³⁰ However, that measure has faced implementation issues, since its enforcement depends on each member State's individual implementation measures, which vary across the Union.³¹

The legal instruments that are perhaps most similar to the Lacey Act in nature and significance are two governing trade in forest products: the European Union Timber Regulation and the Illegal Logging Prohibition Act of Australia. The Timber Regulation, a key part of the European Union Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan, prohibits placing illegally harvested timber and derivative products on the European Union market, and imposes due diligence and record-keeping obligations on operators.³² The Illegal Logging Prohibition Act of Australia also prohibits the import of illegally logged timber and derivative products and requires importers to comply with due diligence obligations and to make a declaration to the Customs Minister about their compliance. It provides for criminal penalties including up to five years' imprisonment for knowing violations of the Act.³³

A comparative analysis of the Lacey Act, the European Union Timber Regulation and the Illegal Logging Prohibition Act of Australia carried out by

²⁹ Kuemlangan, "National legislative options to combat IUU fishing", p. 174; see also Rose and Tsamenyi, "Universalizing jurisdiction over marine living resources crimes", p. 60.

³⁰ Council Regulation No. 1005/2008 of 29 September 2008 to prevent, deter and eliminate illegal, unreported and unregulated fishing (*Official Journal of the European Union*, L 286/1), entered into force on 1 Jan. 2010.

³¹ Mike Beke and Roland Blomeyer, *Illegal, Unreported and Unregulated Fishing: Sanctions in the EU* (Brussels, European Parliament, Policy Department B: Structural and Cohesion Policies, 2014).

³² Regulation No. 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market (*Official Journal of the European Union*, L 295/23); European Commission, Environment, Forests, "Illegal logging/FLEGT Action Plan". Available at http://ec.europa.eu/environment/forests/illegal_logging.htm. Timber and timber products covered by valid Forest Law Enforcement, Governance and Trade or Convention on International Trade in Endangered Species of Wild Fauna and Flora licenses are considered compliant with the requirements of the Regulation.

³³ Illegal Logging Prohibition Act (2012), sections 8 and 9. The Act also allows for forfeiture of goods (but not means of transport) and sets maximum financial penalties, including criminal and civil fines, expressed in penalty units indexed each financial year to increase in line with inflation. For more about financial penalty units, see www.legalaid.vic.gov.au/find-legal-answers/fines-and-infringements/penalty-units.

ClientEarth in 2015 emphasized that European and Australian regulations only apply to the entity first placing timber on the market, while the Lacey Act applies to other entities across the supply chain.³⁴ Both the Timber Regulation and the Illegal Logging Prohibition Act use lists of covered products, while the Lacey Act covers “any wild member of the plant kingdom, including roots, seeds, parts and products thereof, and including trees from either natural or planted forest stands” and has a list of excluded plants such as common food crops, except for trees and common cultivars.³⁵

While many of these instruments provide important tools for addressing the trade in wildlife, they do not go far enough. A 2016 study on wildlife crime requested by the Committee on the Environment, Public Health and Food Safety of the European Parliament concluded that “the European Union should consider measures to curtail activities involving wildlife species protected by laws of their countries of origin” and noted that “the American ‘Lacey Act’ provides a simple and realizable model for such an approach”.³⁶

Severe penalties and long reach: making wildlife criminals pay

The Lacey Act has been noted by the international community for its effectiveness in addressing wildlife crime that takes place beyond United States borders. This aspect of the Act shifts some of the cost and responsibility for prosecuting international wildlife offenders to the United States, a country with one of the strongest judicial systems in the world. While that may not be the primary aim of the Act, it is one of its most significant results in the global fight against wildlife crime.

The case *United States v. Bengis* illustrates the potential of the Lacey Act to put a high price on international wildlife crime (see box 2). In the case, the United States successfully prosecuted a ring of smugglers of rock lobster caught illegally in South Africa, after South Africa declined to charge them,

³⁴ ClientEarth, “Comparison of illegal logging laws in the European Union, the United States, Australia and Japan”, 3 August 2018. Available at www.documents.clientearth.org/library/download-info/comparison-of-illegal-logging-laws-in-the-eu-the-us-australia-and-japan/.

³⁵ Regulation No. 995/2010 of the European Parliament and of the Council, annex; Australia, Illegal Logging Prohibition Regulation 2012, Schedule 1; Lacey Act, United States Code, Title 16, sect. 3371 (f) (1) and United States, Code of Federal Regulations, Title 7, sect. 357.2. For a comparison between the products covered by the European Union Timber Regulation and those covered by the Illegal Logging Prohibition Act of Australia, see Forest Stewardship Council, “FSC and the Australian Illegal logging prohibition Act 2012”, p. 2.

³⁶ Stephan Sina and others, *Wildlife Crime* (Brussels, European Parliament, Policy Department A: Economic and Scientific Policy, 2016), p. 109.

resulting in a forfeiture of \$7,400,000 to the United States and an order to pay restitution to South Africa in the amount of \$22,446,720.³⁷

United States v. Bengis is one among many other cases that combine offences under the Lacey Act with other charges such as conspiracy, smuggling, evasion and money-laundering. The resulting conspiracy and smuggling convictions provided the basis for restitution, leading to a much more substantial sanction that provided some compensation to South Africa for its loss of biodiversity while increasing the cost of wildlife trafficking.³⁸ Combining the federal charge of conspiracy with provisions of the Lacey Act can also have evidentiary advantages that can help the prosecution in proving its case.³⁹

Box 2. *United States v. Bengis*

The most famous case prosecuted under the Lacey Act is *United States v. Bengis*. Arnold Bengis, director of Hout Bay Fishing Industries, ran a decade-long operation to catch rock lobster and Patagonian toothfish in South Africa and smuggle them into the United States, together with David Bengis and Jeffrey Noll.^a The activity in South Africa violated the Marine Living Resources Act No. 18 of 1998 of South Africa and the Convention on the Conservation of Antarctic Marine Living Resources. It also significantly impacted rock lobster resources, and cost South Africa between \$46.7 and \$61.9 million.^b

Through a plea agreement with the fish and fish-processing operation run by the Bengis family, South Africa obtained a payment of \$7,049,080. However, according to the court in the *United States v. Bengis* case:

Although South African authorities obtained arrest warrants for defendants, after concluding that defendants' financial resources and presence outside of South Africa rendered them "beyond the reach of South African authorities," South Africa declined to charge, much less prosecute them.^c

Before the United States court, all three defendants pleaded guilty to conspiring to violate the Lacey Act and to commit smuggling, and two of them also pleaded guilty to violations of the Lacey Act's provisions on wildlife trafficking in foreign commerce. Through a combination of conspiracy charges and charges under the Lacey Act, all three defendants were sentenced to significant terms of imprisonment and forfeited a total of \$7,400,000 to the United States.^d

³⁷The restitution order was for \$30,000,000, offset by the amount already received by South Africa from a plea agreement. Note that the forfeiture reported by the Court of Appeals was \$13,300,000, but that was in error. See United States Court of Appeals, Second Circuit, Brief for the United States of America, *United States of America v. Arnold Maurice Bengis, Jeffrey Noll and David Bengis*, Docket No. 07-4895-cr (9 May 2008), pp. 4–6.

³⁸See United States Court of Appeal, First Circuit, *United States v. Place*, 693 F.3d 219, 222 (2012); see also *United States v. Zaruskas*, 814 F.3d 509 (2016).

³⁹Christine Fisher, "Conspiring to violate the Lacey Act", *Environmental Law*, vol. 32, No. 2 (2002).

Box 2. *United States v. Bengis* (continued)

Defendants were also ordered to pay restitution to the Government of South Africa under the Mandatory Victims Restitution Act and Victim and Witness Protection Act. According to the United States Court of Appeals:

South Africa: (1) has a property interest in rock lobsters unlawfully harvested from its waters, (2) is a victim for restitution purposes, as defined by the Mandatory Victims Restitution Act and the Victim and Witness Protection Act, and (3) whatever the complexity in fashioning a restitution order in this case, it is insufficient to preclude entry of such an order under the Mandatory Victims Restitution Act.^e

After declaring South Africa eligible to receive restitution, the Court recommended calculating the restitution award by multiplying the number of poached lobsters by the corresponding market price at the time the lobsters were poached. The Court added that both a restitution award and a forfeiture could be imposed in the case, leaving the determination of the amount of restitution to the district court. On remand, on 14 June 2013, the district court entered a restitution order of \$22,446,720, which was confirmed by the Court of Appeals.^f

In the end, the application of the Lacey Act in combination with conspiracy and restitution provisions resulted in a combined sanction of almost \$37,000,000, as well as prison time of one year for David Bengis, two and a half years for Jeffrey Noll and almost four years for Arnold Bengis.

^eFor an excellent description of the case *United States v. Bengis* and lessons for wildlife crime enforcement by the case's lead prosecutor, see Asner, "To catch a wildlife thief".

^bAsner, "To catch a wildlife thief".

^cUnited States Court of Appeals, Second Circuit, *United States v. Bengis*, 631 F.3d 33 (2nd Cir. 2011), p. 36.

^dAsner, "To catch a wildlife thief", p. 13; United States Department of Justice, Southern District of New York, "Officers of fishing and seafood corporations ordered to pay nearly \$22.5 million to South Africa for illegally harvesting rock lobster and smuggling it into the United States", press release No. 13-205 of 14 June 2013; *United States of America v. Arnold Maurice Bengis, Jeffrey Noll and David Bengis*, pp. 4-6.

^e*United States v. Bengis*, 631 F.3d 33 (2011), p. 35.

^f*United States v. Bengis*, 783 F. 3d 407 (2015), p. 413.

One of the strengths of the Lacey Act is that it provides tailored sanctions that vary depending on several factors, such as the severity of the misconduct, the degree of knowledge of the violator and the violator himself or herself. Thus, for some types of prohibited conduct, violators are sanctioned with civil fines only, whereas other violators—notably, organizations that knowingly import or export wildlife, or attempt to do so, knowing the wildlife has been taken, possessed, transported or sold in violation of some law or regulation—face criminal felony penalties of up to five years in prison and \$500,000 or twice the gross gain or loss from the illegal activity, as well as permit sanctions and

forfeiture of wildlife and equipment.⁴⁰ As illustrated by the *United States v. Bengis* case, described above, prosecutors can use other legal instruments to increase the total penalty.⁴¹

The Lumber Liquidators case provides an additional illustration of the strong sanctions that can be imposed under the Lacey Act, particularly when addressing the actions of corporations. In 2015, Lumber Liquidators was charged under the Lacey Act for using timber that was illegally logged in the Russian Federation, and for falsifying import declarations.⁴² The company pleaded guilty to four misdemeanour due care violations and one felony charge for entry of goods by means of false statements and was sentenced to over \$10 million, including criminal fines, forfeiture and community service payments.⁴³ Lumber Liquidators also agreed to implement a government-approved environmental compliance plan, backed up by independent audits and organizational probation. Assistant Attorney General John C. Cruden commented:

The case against Lumber Liquidators shows the true cost of turning a blind eye to the environmental laws that protect endangered wildlife ... This company left a trail of corrupt transactions and habitat destruction. Now they will pay a price for this callous and careless pursuit of profit.⁴⁴

There is some controversy over the idea that strong sanctions act as a deterrent to criminals. Even the most severe sanction will have little deterrent value if criminals do not think they will be caught. Ultimately, international wildlife crime operations, like other large-scale criminal operations, are businesses. Operators will continue their criminal activity as long as the business model continues to make sense, that is, as long as the projected benefits exceed the projected costs, which includes the calculation of sanctions multiplied by risk. A combination of strong sanctions and consistent enforcement will contribute to higher costs and drive wildlife criminals out of business.

⁴⁰ United States Code, Title 16, sect. 3372 (b) and sect. 3373 (a) (2); Title 16, sect. 3373 (d) (1) (A), read together with title 18, sect. 3559 (a) (5) and sect. 3571 (c) (3) and (d).

⁴¹ *United States v. Bengis*, 631 F.3d 33 (2011) and High Court of South Africa, *Bengis and others v. Government of South Africa and others*, Case No. 16884/2013 (2016). In addition to significant prison time, the defendants had to pay a sanction amounting to nearly \$37,000,000 in total (\$7,400,000 of forfeiture to the United States and a total of \$29,495,800 to South Africa, including a restitution order of \$22,446,720).

⁴² United States Department of Justice, "Lumber Liquidators Inc. sentenced for illegal importation of hardwood and related environmental crimes", press release No. 16-116 of 1 February 2016.

⁴³ Lumber Liquidators, "Lumber liquidators announces settlement related to Lacey Act Investigation", press release of 7 October 2015.

⁴⁴ "Lumber Liquidators Inc. sentenced for illegal importation of hardwood".

Enforcing legal trade: overcriminalization or protecting good business?

On 24 August 2011, armed federal agents entered the offices and factories of the Gibson Guitar Corporation in Nashville, Tennessee, United States, searching for contraband and evidence of illegally sourced Malagasy ebony and Indian ebony and rosewood. That was the second time in two years that the guitar maker had been subject to a federal action that disrupted production and entailed seizure of documents, tools, instruments and wood.⁴⁵ Gibson's public comments condemned what they called "two hostile raids on its factories by agents carrying weapons and attired in SWAT [special weapons and tactics] gear where employees were forced out of the premises, the production was shut down, goods were seized as contraband and threats were made that would have forced the business to close", and the Chief Executive Officer, Henry Juskiewicz, commented, "we feel that Gibson was inappropriately targeted".⁴⁶

The Gibson case received a lot of media attention, much of it negative. A blogger for the New York Times wrote that, in 2009, "more than a dozen agents with automatic weapons burst into a Gibson factory in Nashville and seized pallets of ebony fingerboards from Madagascar".⁴⁷ However, that portrayal may not be entirely accurate. Amidst a drawn-out judicial contest over the seized wood, Gibson hired a lobbying firm to support its case in the media, the same firm that advocated for amending the Lacey Act.⁴⁸ The Fish and Wildlife Service agents that entered the Gibson premises were operating in accordance with valid warrants, as part of a judicial process in which Gibson participated. After initially claiming that the seized wood was legal, Gibson admitted that their agent knew that the Malagasy ebony might have been harvested and/or exported in violation of Malagasy law.⁴⁹

Gibson entered into a criminal enforcement agreement with the United States Department of Justice in 2012. According to Assistant Attorney General Moreno:

Gibson has acknowledged that it failed to act on information that the Madagascar ebony it was purchasing may have violated laws intended to limit

⁴⁵James C. McKinley Jr., "Famed guitar maker raided by federal agents", *New York Times*, 31 August 2011.

⁴⁶Gibson, News-Lifestyle, "Gibson comments on Department of Justice settlement: Government agrees it will not prosecute any criminal against Gibson", 6 August 2012.

⁴⁷McKinley Jr., "Famed guitar maker raided by federal agents".

⁴⁸Marcus Asner, Maxwell Preston and Katherine Ghilain, "Gibson Guitar, Forfeiture, and the Lacey Act Strike a Dissonant Chord", *Daily Environment Report*, 170 DEN B-1 (Arlington, Virginia, Bureau of National Affairs, Inc. (2012)), p. 2.

⁴⁹Ibid.

overharvesting and conserve valuable wood species from Madagascar, a country which has been severely impacted by deforestation. Gibson has ceased acquisitions of wood species from Madagascar and recognizes its duty under the United States Lacey Act to guard against the acquisition of wood of illegal origin by verifying the circumstances of its harvest and export, which is good for American business and American consumers⁵⁰

The agreement provided that Gibson was to pay a fine of \$300,000 to the United States Government, in addition to a community payment of \$50,000 to the National Fish and Wildlife Foundation for the promotion of the conservation, identification and propagation of protected tree species used in the musical instrument industry and of the forests housing those species. The agreement further stated that Gibson was to withdraw all of its claims relating to the wood seized by investigators, including shipments worth \$261,844. Finally, the agreement required Gibson to continue to strengthen its compliance standards, procedures and controls, in accordance with a compliance programme detailed in an appendix.⁵¹ A separate procedure dealt with seized Indian wood, which was returned to Gibson after the relevant Indian law was deemed uncertain.⁵²

The Gibson case highlights a question that goes to the heart of the Lacey Act: how does it impact legitimate business? Critics argue that the Act disproportionately penalizes businesses, such as the Gibson Guitar Corporation, by holding them liable for violations of foreign law they may not have known they were violating.⁵³ Supporters claim that the very purpose of the Lacey Act is to protect United States businesses against illegal trade. Such debates particularly arose following the amendments in 2008 that expanded the Act to cover plants and plant products, such as timber and wood, as well as fish and wildlife.⁵⁴ The Gibson example was held up as evidence of the need to amend the Lacey Act or repeal it entirely.⁵⁵

⁵⁰ United States Department of Justice, "Gibson Guitar Corp. agrees to resolve investigation into Lacey Act violations", press release No. 12-976 of 6 August 2012; see also the Criminal Enforcement Agreement dated 27 July 2012 and entered into by the United States Attorney's Office, the United States Department of Justice, Environmental Crimes Section, and Gibson Guitar Corp., available at www.fws.gov/home/feature/2012/USvGibsonGuitarAgreement.pdf.

⁵¹ See Criminal Enforcement Agreement, 2012.

⁵² Asner, Preston and Ghilain, "Gibson Guitar, Forfeiture, and the Lacey Act Strike a Dissonant Chord", p. 5.

⁵³ See Andrew C. Revkin, "A closer look at Gibson Guitar's legal troubles", *New York Times*, 10 August 2012; see also C. Jarrett Dieterle, "The Lacey Act: a case study in the mechanics of overcriminalization", *Georgetown Law Journal*, vol. 102, No. 4 (2014), p. 1285.

⁵⁴ See Rand Paul, "Sens. Paul, McConnell introduce FOCUS Act of 2015", press release of 21 April 2015; Jarrett Dieterle, "The Lacey Act": a case study"; Matthew S. White, "Overcriminalization based on foreign law: how the Lacey Act incorporates foreign law to over criminalize importers and users of timber products", *Global Studies Law Review*, vol. 12, No. 2 (2013).

⁵⁵ White, "Overcriminalization based on foreign law", p. 183.

In the ensuing congressional discussions, supporters of the Lacey Act argued that it was in fact good for business. By removing illegal goods from the market, the Lacey Act helped protect legitimate United States commerce, including law-abiding consumers and businesses.⁵⁶ They further argued that cases such as *United States v. Bengis* served to disable international criminal organizations that hurt the United States market. According to Marcus Asner, the prosecutor in the *United States v. Bengis* case, “by dumping illegal fish onto the United States market, [Bengis and collaborators] undercut legitimate competitors, hurt United States fishermen, passed off illegal lobster to unwitting United States consumers and threatened the future viability of a previously healthy lobster supply”.⁵⁷

Although there has been no comprehensive study of the impact of the Lacey Act on United States businesses, studies have been conducted on the impact of similar measures in other jurisdictions. In 2016, the Government of Australia commissioned a report on the impact on small businesses of the Australian regulations on illegal logging. The report, undertaken by the firm KPMG, drew on available information and stakeholder insights to assess the impact on small businesses of the Australian legislation and regulations and their effectiveness in addressing illegal logging in the supply chain. The report found that there had been some costs to small businesses in implementing the regulations, but that there was also evidence that the regulations had helped reduce the risk of illegally logged products entering the Australian market.⁵⁸

Part of the additional regulatory burden on businesses operating internationally can be mitigated by harmonizing regulations. For example, the Government of Australia intentionally drafted its Illegal Logging Prohibition Act to be consistent with the European Union Timber Regulation and the Lacey Act in order to reduce the impact on businesses importing timber products into Australia.⁵⁹

The Gibson Guitar story demonstrates the Lacey Act’s potential. The European Union Forest Law Enforcement, Governance and Trade Facility praised the Gibson example as the first big case under the 2008 amendments

⁵⁶Statement for the record by Marcus Asner and Katherine Ghilain, “Regulatory crime: solutions”, 14 November 2013; Testimony of Marcus Asner, “Oversight hearing on the 2008 Lacey Act Amendments”, 16 May 2013.

⁵⁷Asner, “To catch a wildlife thief”, p. 11.

⁵⁸Australia, KPMG, *Independent review of the impacts of the illegal logging regulations on small business* (Canberra, Department of Agriculture, 2015).

⁵⁹Ragnar Jonsson and others, *Assessment of the EU Timber Regulation and FLEGT Action Plan: From Science to Policy 1* (Joensuu, Finland, European Forest Institute, 2015), p. 10.

of the Lacey Act to set an example by showing that “forest legislation can successfully deal with companies who purchase and import illegally harvested timber” and “deter other companies from trading in illegally logged timber in the future”.⁶⁰ Despite the negative press, the case shows that the Lacey Act is functioning as it was intended: as a mechanism to address the illegal trade in wildlife by holding companies accountable for buying and using illegal products.

Due diligence and due care: when ignorance is a crime

Can someone be held responsible for a crime they didn’t know they committed? Under the Lacey Act, the most severe penalties are reserved for knowing violations, for example, where an operator imports fish, timber or other wildlife that he or she knows is illegal. However, the Act does also provide for misdemeanour and civil penalties in cases where the actor did not *actually* know about the violation of an underlying law but *should have known*. Those offences hinge upon the standard of due care.

According to the United States Senate report supporting the 1981 amendments to the Lacey Act, “due care simply requires that a person facing a particular set of circumstances undertake certain steps which a reasonable man would take to do his best to ensure that he is not violating the law”.⁶¹ In her Congressional Research Service report, Kristina Alexander explained that due care refers to “what is reasonable, such as asking questions”, without condoning wilful ignorance.⁶² To illustrate the importance of the circumstances in the exercise of due care, Kristina Alexander wrote, “a first-time buyer of imported animals ... is likely to be found to have less responsibility than an importer of those animals”.⁶³

Critics of the Lacey Act often misunderstand—or misrepresent—the standard of due care. Paul Larkin, Senior Legal Research Fellow at The Heritage Foundation’s Meese Center for Legal and Judicial Studies, argues that the Lacey Act’s criminal provisions require the average United States citizen to know all foreign criminal and civil laws, even if they are written in another

⁶⁰European Union Forest Law Enforcement, Governance and Trade (FLEGT) Facility, “US enforces the Lacey Act in Gibson Guitar case”, 16 August 2012.

⁶¹United States Senate Report 97-123, p. 10; reprinted in *United States Code Congressional and Administrative News* (1981), 1748, 1757–58.

⁶²Kristina Alexander, “The Lacey Act: protecting the environment by restricting trade”, *Congressional Research Service Reports* No. R42067 (Washington, D.C., Congressional Research Service, 2014), p. 10.

⁶³*Ibid.*

language.⁶⁴ Other critics claim that the great number and uncertainty of existing foreign laws make it very difficult for actors to know what conduct is criminal.⁶⁵

Such arguments are largely specious and reflect a misunderstanding of the requirement of due care. Under the due care standard, operators need to adhere to reasonable business practices, which does not entail a requirement to know all foreign law. Persons who have unknowingly committed violations but can prove they adhered to the standard will face, at most, forfeiture. This is in line with other areas of law: persons who unknowingly purchase a stolen watch, car or painting are also required to forfeit the item once the crime is discovered.

Even those who fail to demonstrate due care will face, at most, misdemeanour penalties. In the Gibson Guitar case, described above, it was found that Gibson failed to exercise due care: despite having received information that its wood was illegal, it did not investigate or take other reasonable measures to determine the legality of its supply. The agreed fine, while significant, was lower than what Gibson might have been sentenced to pay upon a felony conviction, in particular given the possibility in that case of additional conspiracy and smuggling charges. The fine was not disproportionate. Gibson's conduct went far beyond simply not being aware of vague foreign laws: the company explicitly ignored evidence of illegality. Wilful ignorance is not—and should not be—a tool to enable the illegal trade in wildlife.

It is worthwhile to compare the due care standard for misdemeanours under the Lacey Act with the due diligence obligations under European Union Timber Regulation and the Illegal Logging Prohibition Act of Australia. Under both the Timber Regulation and the Illegal Logging Prohibition Act, due diligence is an obligation additional to the prohibition on placing illegally harvested timber on the market. It translates into a risk management exercise to minimize the risk of placing illegally harvested timber on the market and can be divided into three elements: information, risk assessment and risk mitigation.

The European Union Timber Regulation specifies that the operator must gather information on its supply of timber and timber products, including country of harvest, species, quantity, details about the supplier and compliance with applicable legislation. The operator should then analyse and

⁶⁴Paul Larkin, "The FOCUS Act Hearing: unpersuasive criticisms and tacit admissions", The Heritage Foundation, 10 May 2012.

⁶⁵Jarrett Dieterle, "The Lacey Act: a case study", p. 1299.

evaluate the risk of illegal timber in his or her supply chain, using the information identified above and the criteria set out in the Regulation. If the assessment reveals a risk, that risk has to be mitigated by adequate and proportionate measures such as additional information and third-party verification.⁶⁶ All operators must exercise due diligence, but in practice, the measures vary in light of the circumstances of each case. The Regulation also provides for recognition of monitoring organizations, enabling them to design due diligence systems for European Union operators who wish to use them.⁶⁷

Whereas the European Union due diligence system creates an additional obligation, the Lacey Act's due care provisions were intended to avoid excessive penalization of unknowing actors. According to the Senate report supporting the 1981 amendments to the Act, the civil penalty provisions were included with the understanding that they would not be administered to penalize innocent purchasers or consumers, but rather with the clear intent that they would be applied fairly in an equitable and non-abusive manner.⁶⁸ Kristina Alexander sums up this idea in her Congressional Research Service report, stating that "the due care requirement was added to avoid overzealous prosecution of unknowing violators".⁶⁹

This difference reflects the different approaches to combating the trade in illegal timber: the European Union Timber Regulation involves a system-based and prescriptive approach, while the Lacey Act involves a strictly fact-based and reactive approach.⁷⁰ However, in practice, the due diligence obligation under the Timber Regulation and the due care obligation under the Lacey Act both result in placing responsibility on operators to obtain information about the legality of their timber supplies. The main practical difference is that the Timber Regulation provides a process for exercising due diligence while the Lacey Act does not establish any process for exercising due care.⁷¹

The creation of such a process would be useful, and could serve to address a key weakness in the Lacey Act. In her Congressional Research Service report to the United States Congress, Pervaze A. Sheikh argued that a process for

⁶⁶ Regulation No. 995/2010 of the European Parliament and of the Council of 20 October 2010, art. 6, para. 1.

⁶⁷ *Ibid.*, art. 8.

⁶⁸ United States Senate Report 97-123, reprinted in *United States Code Congressional and Administrative News* (1981), 1748, 1757.

⁶⁹ Alexander, "The Lacey Act: protecting the environment", p. 10.

⁷⁰ The European Union Timber Regulation prohibition on placing illegal wood on the market could also be considered a reactive approach.

⁷¹ Sheikh, "The Lacey Act: compliance issues related to importing plants", p. 19.

exercising due care could address the current lack of clarity on how to exercise the Lacey Act's due care provisions and help provide a defence against charges when due care is exercised. Such a process would also promote coherent practices among importers, facilitating their coordination to make sure their products are legal and lowering their compliance costs.⁷² This argument is particularly relevant for small and medium-sized enterprises, as they might have fewer resources to exercise due care than larger companies.

In her report, Sheikh also argues that a specified process could help law enforcement authorities to monitor compliance by providing them with a benchmark for bringing charges on the basis of failure to undertake due care.⁷³

There is a risk that establishing a specified process under the Lacey Act similar to the due diligence process under the European Union Timber Regulation may create a loophole allowing violators to avoid responsibility by “ticking the boxes” of the process. Under the Timber Regulation, that risk is offset by holding persons responsible for the placing of illegal wood on the market, regardless of compliance with the due diligence obligation. To be consistent with the approach under the Lacey Act, any due care process should be in the form of guidelines intended only for purposes of clarification.

United States authorities such as the Animal and Plant Health Inspection Service have responded to criticisms about the lack of clarity, notably by publishing factsheets and other similar documents on how to exercise due care.⁷⁴ Private initiatives such as the Lacey Act Defense National Consensus Committee—a group made up of companies, associations and organizations impacted by the Lacey Act, and leading environmental groups—have also worked on creating a process aimed at defining due care under the Lacey Act.⁷⁵

Predicate offences and foreign law: grounds to support a case

Although the argument that the Lacey Act unreasonably requires operators to understand confusing laws in foreign languages holds little weight, there are issues raised by predicating one country's criminal offences on another country's laws, including questions of sovereignty and jurisdiction, as well as practical concerns.

⁷² *Ibid.*, p. 20.

⁷³ *Ibid.*, p. 20.

⁷⁴ See United States, Department of Agriculture, Animal and Plant Health Inspection Service, Lacey Act, “Lacey Act primer and updates”. Available at www.aphis.usda.gov/.

⁷⁵ For more information, see Capital Markets Partnership, “Lacey Act due care certification of compliance” (2012).

The case *United States v. McNab* is frequently cited to illustrate the difficulties encountered regarding the interpretation of foreign predicate laws.⁷⁶ In the *McNab* case, four persons were convicted of selling, purchasing and importing to United States territory in the Caribbean spiny lobsters from Honduras caught in violation of Honduran law. On appeal, the defendants argued, on the basis of the position of the Government of Honduras itself, “that the Honduran laws were invalid, and, therefore, there was no violation of foreign law upon which to base their convictions”.⁷⁷ The stakes were high, since the defendants had been given significant prison sentences at trial.⁷⁸ The Court of Appeals stated that:

The defendants’ challenge to the validity of the Honduran laws requires us to undertake our own foreign law determination. Our task is complicated by conflicting representations from Honduran officials regarding the validity of the Honduran laws. Throughout the investigation and trial, Honduran officials offered support and assistance to the United States Government, and both the Government and the district court relied upon the Honduran officials’ verification of the Honduran laws. Shortly after the defendants were convicted, the Honduran Government reversed its position; it currently refutes the validity of the laws it previously verified.⁷⁹

The court ultimately held that, at the time the conduct had occurred, Honduran law had prohibited the harvesting of the spiny lobsters, and upheld the conviction under the Lacey Act.⁸⁰

United States v. McNab is an extreme case, but it demonstrates that the interpretation of another country’s laws may not be straightforward. Here, it is important to emphasize that the interpretation of the foreign law is done for the purpose of resolving the case in question, and thus has no precedential value. Moreover, interpreting foreign predicate laws is neither new nor unique to the Lacey Act.⁸¹ It is especially common in cases involving the international trade of goods, and most jurisdictions have rules governing such

⁷⁶United States Court of Appeals, Eleventh Circuit, *United States v. McNab*, 331 F.3d 1228 (2003).

⁷⁷*Ibid.*, p. 1232.

⁷⁸On the basis of a combination of conspiracy, smuggling, money-laundering, false labelling and Lacey Act violations, three of the defendants had been sentenced to eight years and one month in prison each, and the fourth defendant faced two years in prison. *United States v. McNab*, p. 1235.

⁷⁹*Ibid.*, p. 1232.

⁸⁰*Ibid.*, p. 1251.

⁸¹Testimony of Marcus Asner in Oversight Hearing on “*Why should Americans have to comply with the laws of foreign nations?*” (2013), p. 5 and 6.

interpretation.⁸² And if the relevant foreign law is too ambiguous, the mental state requirements under the Lacey Act protect the innocent possessor of illegal wildlife.

In the *United States v. McNab* case, the defendants were not innocent possessors but rather “a large, sophisticated, and destructive international criminal organization engaged in a massive scheme” involving more than 1.6 million pounds (725,000 kg) of spiny lobster worth over \$17 million.⁸³ The illegal harvest of undersized and egg-bearing lobsters affected the supply of lobsters in both Honduras and the south-eastern United States, and had a devastating impact on the state of Florida’s commercial lobster fisheries.⁸⁴

Another question concerns the broad scope of predicate offences under the Lacey Act. Following the 2008 amendments to the Act, some contended that the scope of the underlying foreign laws in relation to plant trafficking offences was too broad and that, as a result, the Act covered predicate laws unrelated to conservation, such as export laws, and established criminal offences relating to predicate offences that were not themselves criminal.⁸⁵

The range of predicate offences under the Act can also be seen as one of its advantages. Criminal rings involved in intentional illegal harvesting, and working to avoid capture, may violate laws relating to reporting, money-laundering, corruption, document fraud and customs. In the *United States v. Bengis* case, defendants bribed officials, misreported catches and made false declarations on export documents. Those violations served as predicate law violations under the Lacey Act, giving prosecutors more options to prove their case.⁸⁶

Even where there is no question of interpretation, critics from both within and outside the United States have argued that the United States should not be involved in enforcing the laws of other countries. In that connection, it is important to keep in mind that the Lacey Act does not serve to enforce foreign laws, but rather to regulate United States commerce by excluding wildlife that is illegally obtained abroad. It only provides for the consideration of foreign laws for the purposes of determining the legality of the traded goods, excluding illegal products and protecting legal markets.

⁸²In the United States, these rules are laid out in the Federal Rules of Civil Procedure, rule 44.1 (Determining foreign law) and the Federal Rules of Criminal Procedure, rule 26.1 (Foreign law determination).

⁸³Testimony of Marcus Asner in Oversight Hearing on “*Why should Americans have to comply with the laws of foreign nations?*” (2013), p. 9; see also National Oceanic and Atmospheric Administration, “McNab to continue serving federal prison sentence for lobster smuggling”, press release of 22 March 2004.

⁸⁴“McNab to continue serving federal prison sentence for lobster smuggling”.

⁸⁵Sheikh, “The Lacey Act: compliance issues related to importing plants”, p. 11.

⁸⁶Asner, “To catch a wildlife thief”.

Next steps

The Lacey Act can serve as an efficient solution to a global problem. By prohibiting trade in illegally taken goods, it can function both to protect legal domestic markets and to compensate countries from which such goods are taken. It can also serve as a mechanism for supporting biodiversity conservation that alleviates some of the burden on biodiversity-rich countries that may lack the resources or governance conditions to implement and enforce their laws against international criminal organizations. If a few key importers were to adopt Lacey Act-type legislation, that could have a substantial impact on the global market, making it less lucrative for traffickers. As more countries adopt similar laws, fewer markets will remain open to illegal activities.⁸⁷ That could progressively result in the eradication of the illegal trade in wildlife.

From a practical point of view, introducing Lacey Act-type provisions could help eliminate global legal loopholes by expanding the range of tools available to prosecutors to pursue wildlife criminals. At the same time, countries would still have legislative control over the law that applies within their borders—they could still determine what constitutes illegal fishing, logging, hunting, customs reporting, etc.—but that law would be reinforced by complementary checks on the supply side.

However, importing Lacey Act-type provisions into existing legal systems would require adaptation to each country's political and legal specificities. The Lacey Act is based on a reactive model focused on penalizing offenders—one that suits a common law system in which judges are willing to severely sanction violators. Conversely, the European Union Timber Regulation model may be more suited to other legal systems, in particular civil law systems, that include a prescriptive component consisting of clearly laid out due diligence processes.

Moreover, where the Lacey Act works best, it is applied in combination with other United States laws, such as the conspiracy and restitution provisions relied on in the *United States v. Bengis* case, that result in severe sanctions and a high level of deterrence. The development of a law similar to the Lacey Act in another country would require consideration of existing laws in that country's legislative corpus—a “whole of law” approach to addressing wildlife crime.

In addition, the loudest and most common argument against the Lacey

⁸⁷ Patricia Elias, “Logging and the law: how the US Lacey Act helps reduce illegal logging in the tropics” (Cambridge, Massachusetts, Union of Concerned Scientists, 2012), p. 16.

Act—the overcriminalization argument—may portend a potential public backlash in other countries. Introducing law based on a model from a foreign jurisdiction always carries the risk of rejection by the public. One possible solution would be a stepwise approach. Instead of covering all wildlife products at the outset, the legislation could refer to a limited list of covered products, such as that used by the European Union Timber Regulation, which could be expanded gradually over time.

Given the present review of literature, legal cases and perspectives on the Lacey Act, it is the opinion of the authors that the Lacey Act does have the potential to be used as a model for legislation in different jurisdictions and to provide an effective means to combat illegal trafficking in wildlife through concerted global efforts. However, implementing this will require an understanding of the existing frameworks and needs of different countries and their legal systems.

THE RAPID RISE OF ROSEWOOD TRAFFICKING IN WEST AFRICA

Ted Leggett*

Abstract

In some situations, better legislation might have prevented an ecological catastrophe. One such example is the recent extraction of thousands of tons of an environmentally important timber species in West Africa. In the absence of appropriate laws, this resource—though illegally exported—was legally imported. The article provides a case study of the tremendous challenges surrounding legal and equitable resource extraction in many developing countries. As the economies of these countries will be based on natural resource extraction for the foreseeable future, management of this process will deeply inform the way these countries develop. And because they are poor, these countries will require international assistance to regulate extraction.

Keywords: rosewood, timber, trafficking, regulation

Introduction

In 2014, the customs authorities of Singapore made what was likely the largest seizure of wildlife contraband ever: some 3,000 tons of Malagasy rosewood destined for China, where it would have been worth as much as \$100 million.¹ The seizure was possible because all rosewoods of Madagascar (including 48 *Dalbergia* species and 240 *Diospyros* species)² have been listed in appendix II to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 2013, with a zero export quota.³ It drew international attention to the illegal trade in timber, an often neglected category of wildlife crime.

Quantifying the scale of rosewood trafficking flows is difficult, because “rosewood” is an informal trade term, not a taxonomic category. It refers to a

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¹As noted in table 1, *Dalbergia louvelii*, the predominant type of rosewood harvested in Madagascar, was retailing for \$45,000 per cubic metre in 2014. Similar in density to water, 3,000 metric tons of rosewood is equal to approximately 3,000 cubic metres of water, with a value of approximately \$135 million at the price in 2014.

²Convention on International Trade in Endangered Species of Wild Fauna and Flora, Sixty-fifth meeting of the Standing Committee, “A preliminary *Dalbergia* checklist for Madagascar for CITES” (SC65 Inf. 21).

³See Convention on International Trade in Endangered Species of Wild Fauna and Flora, “Trade in *Dalbergia* spp. and *Diospyros* spp. from Madagascar”, notification No. 2013/039 of 4 September 2013.

variety of colourful (not exclusively red) and often fragrant hardwoods that are suitable for the manufacture of fine furniture. As definitions of rosewood vary, there are no comparable international statistics on the rosewood trade. The two genera most commonly associated with the term “rosewood” are *Dalbergia* and *Pterocarpus*, although not all species of these genera are suitable for making furniture, and not all rosewood species fall under these genera.

One *Pterocarpus* species that has been placed under considerable commercial pressure owing to the rosewood trade is *Pterocarpus erinaceus*, a tree indigenous to the Sahel region of West Africa. It is known as “kosso” in Nigeria, the largest exporter in 2014.⁴ In the last decade, a series of West African countries have reported widespread extraction of kosso, often in contravention of local laws on harvesting and export.

To investigate this extraction activity in preparation for the first *World Wildlife Crime Report: Trafficking in Protected Species*,⁵ a total of 45 interviews were conducted between November 2014 and February 2015 with public officials, timber traders and others involved in the timber industry in five West African countries: Benin, Burkina Faso, Mali, Nigeria and Togo.⁶ In addition, a number of sites central to the processing, trade and export of rosewood timber were visited. That research provided the basis for the present article.

The interviews and an analysis of trade statistics revealed that most of the rosewood exports from West Africa were destined for China. In China, the generic term for rosewood is *hong mu*, although distinctions are made between different types of *hong mu* wood.⁷ Kosso is one of three types of wood growing in West Africa that fall under the Chinese definition of rosewood (see table 1).⁸ On the basis of reports by forestry authorities and agents in West Africa, it was found that there was a sharp increase in the harvesting and export of kosso, which corresponded to a sharp increase in imports of rosewood from West Africa, as reflected in the official import statistics of China.

⁴ *Pterocarpus erinaceus* is known as *vène* in the Francophone countries, *pau de sangue* in Guinea-Bissau, *krayie* or *kpatro* in Ghana and *keno* in the Gambia.

⁵ UNODC, *World Wildlife Crime Report: Trafficking in Protected Species* (United Nations publication, Sales No. E.16.XI.9).

⁶ For a complete list of the interviews, see the discussion on rosewood in the “Methodological annex” to the *World Wildlife Crime Report: Trafficking in Protected Species*, available at www.unodc.org/.

⁷ Individual countries can add extensions to the Harmonized Commodity Description and Coding System (HS) codes for their own record-keeping purposes, and in China, rosewood is captured under HS code 44039930 (“Padauk in the rough”). The definition of woods in this category was established by the Chinese State Administration of Quality Supervision, Inspection and Quarantine in 2000, and includes 33 species of the genera *Dalbergia*, *Pterocarpus*, *Diospyros*, *Millettia* and *Cassia*.

⁸ The other two are *Diospyros crassiflora* and *Dalbergia melanoxylon*. In addition, many of the traders interviewed who were supplying kosso also reported supplying a species not listed in the Chinese rosewood standard, *Afezelia africana*, to the same buyers. This was a particularly common observation in Nigeria and Benin.

Table 1. The 14 species of *hong mu* most commonly traded in China

<i>Scientific name</i>	<i>Common name</i>	<i>Chinese classification</i>	<i>Source</i>	<i>CITES appendix</i>	<i>Price per cubic metre (in United States dollars)</i>
<i>Dalbergia odorifera</i>	Chinese rosewood, huanghuali	Xiangzhi	China	II (2016)	1 500 000
<i>Dalbergia tonkinensis</i>	Sua		Viet Nam	II (2016)	2 000 000
<i>Pterocarpus santalinus</i>	Red sandalwood, red sanders	Zitan	India	II (2007)	358 000
<i>Dalbergia louvelii</i>	Bois de rose, Malagasy rosewood	Hei suanzhi	Madagascar	II (2013)	45 000
<i>Dalbergia cochinchinensis</i>	Siamese rosewood, Thai rosewood	Hong suanzhi	Mekong Basin	II (2013)	93 000
<i>Dalbergia retusa</i>	Black rosewood, cocobolo	Hong suanzhi	Central America	II (2013)	32 000
<i>Pterocarpus macarocarpus/cambodianus</i>	Burmese padauk	Huali	Mekong Basin		6 300
<i>Dalbergia cearensis</i>	Kingwood	Hong suanzhi	Brazil	II (2016)	
<i>Dalbergia oliveri/bariensis</i>	Burmese rosewood, tamalan	Hong suanzhi	Mekong Basin	II (2016)	9 200
<i>Dalbergia stevensonii</i>	Honduran rosewood	Hei suanzhi	Central America	II (2013)	
<i>Millettia laurentii</i>	Wenge	Jichi	Congo Basin		850
<i>Millettia leucantha</i>	Sathon	Jichi	Mekong Basin		
<i>Dalbergia melanoxylon</i>	African blackwood	Hei suanzhi	East Africa	II (2016)	2 400
<i>Pterocarpus erinaceus</i>	Kosso, vène, African rosewood	Huali	West Africa	II (2016)	1 100

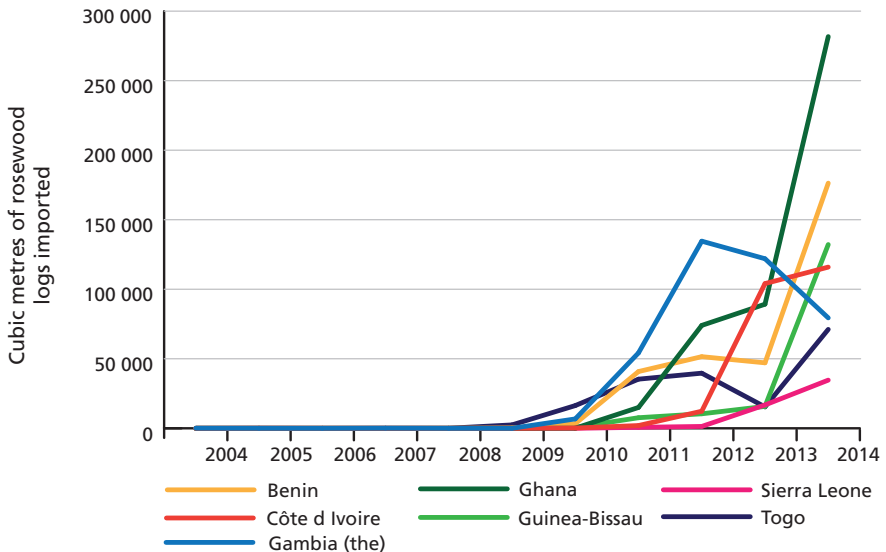
Source: Adapted from Huang Wenbin and Sun Xiufang, "Tropical hardwood flows in China: case studies of Rosewood and Okoumé" (Washington, D.C.: Forest Trends, 2013), p. 4.

Note: Common names and Chinese classifications are based on field research. The CITES appendix status is based on CITES documents. The price in China is based on data from the International Timber Trade Organization in November 2014, except for data on the prices of *Dalbergia odorifera* and *Dalbergia tonkinensis*, which come from Wenbin and Xiufang, "Tropical hardwood flows in China". Wenbin and Xiufang include *Dalbergia cearensis* and *Millettia leucantha* as being among the 16 most commonly traded rosewood species in China, but their study found little evidence of harvesting and trade.

Kosso is an important tree in West Africa, where it has a variety of uses. It grows in arid areas, drawing rain. It retains its leaves during the dry season, which provide fodder for both livestock and wildlife. It is fire-resistant, with thick bark, and nitrogen-fixing, adding to the fertility of the soil. It has medicinal uses, provides high-quality firewood and is used for local woodworking.⁹ The value of such a tree is manifest to local inhabitants, and its harvesting has been controlled in some countries in the past. There has been very little cultivation of the tree, however, and stocks today are almost exclusively sourced in the wild. Most importantly, according to forestry officials in the region, it had never been exported until the last decade; so, exploitation was limited to local demand.

That all began to change about a decade ago, as supplies of the Asian *hong mu* species that had traditionally supplied the Chinese market began to thin, just as the market itself began to expand dramatically. In 2004, 75 per cent of the volume of rosewood imports into China came from just three countries: the Lao People's Democratic Republic, Myanmar and Viet Nam. In 2014, only 44 per cent came from those three countries, while 42 per cent came from States of the Economic Community of West African States (ECOWAS).¹⁰ According to those interviewed in West Africa, the imports from West Africa consisted almost exclusively of kosso (see figure I).

Figure I. Volume of rosewood logs imported into China from selected West African countries, 2004–2014



Source: World Trade Atlas, citing the customs authorities of China.

⁹Based on interviews with forestry expert in the region and profiles such as that provided by the World Agroforestry Centre, Agroforestry Database, *Pterocarpus erinaceus*, available at www.worldagroforestry.org/.

¹⁰World Trade Atlas, citing the customs authorities of China.

In all of the countries visited, there was a significant time lag between the inception of large-scale kosso exports and government reaction to the problem posed by such exports. The primary reason for the lag was that Governments were taken by surprise. Kosso grows in arid areas, and the people in those areas have no familiarity with commercial forestry. In many cases, it took them some time to fully comprehend the concept of deforestation. When the Governments did become aware of the unprecedented demand, each eventually imposed some form of legal restriction designed to halt the extraction of the wood. This action culminated in Senegal requesting CITES to list kosso in CITES appendix III, thus requiring all kosso exports to include certification of origin.¹¹ The species was listed in appendix II at the CITES Conference of the Parties in 2016, alongside all *Dalbergia* species.¹²

The field research revealed a very similar situation in each of the five countries visited. Foreign timber buyers worked with local agents to extract the wood quickly, before the impact became evident. In each country, the wood was squared, cut into 2.1 metre lengths, then loaded into containers. However, owing to the particularities of each country, the extraction manifested itself in different ways. These differences are explored in the following sections.

Mali

One of the poorest countries in the world, only 4 per cent of the territory of Mali is forested,¹³ and the vast majority of its forests belong to the State. Not surprisingly, log exports have been extremely limited historically.¹⁴ Most of the country is desert or semi-desert, with most of the population engaged in subsistence agriculture. In such a context, nitrogen-fixing and rain-drawing trees are an extremely valuable resource, worth far more alive than dead. In recognition of this fact, kosso is one of 11 tree species that has been protected under the law of Mali since 1995.

In Mali, as in some other West African countries, there appears to be a difference between what is legal and what is practiced. Despite being a protected species, the forestry officials interviewed were able to immediately cite detailed

¹¹ See “International trade in rosewood timber species [*Leguminosae (fabaceae)*]” (CoP17 Doc. 62 (Rev. 1)), para. 4.

¹² <https://cites.org/eng/cop/17/prop/index.php>.

¹³ World Bank, Forest area (percentage of land area). Available at <http://data.worldbank.org/indicator/AG.LND.FRST.ZS?locations=ML>.

¹⁴ The value of log exports amounted to less than \$2 million out of a total of \$867 million for all exports in 2014, according to UN Comtrade – International Trade Statistics Database.

stumpage fees for kosso, suggesting that permits for harvesting had been made available in the recent past. Indeed, an official in the Ministry of Environment explained how a simplified kosso stumpage rate scheme had been refined in 2010 to a more complex scheme, with four tree diameters specified and significantly higher rates charged for all of them. This is an unusual practice for a protected species.

Whatever the restrictions on kosso harvesting may be, the export of logs of any species, including roughly squared logs, has been banned since July 2014.¹⁵ The ban was issued in response to the popular unrest concerning the massive harvesting and export of kosso logs from the country, a process that reportedly began as early as 2003. One of the first areas hit by kosso buyers was Kita, a town in western Mali. A senior customs official in Bamako reported that while he had been stationed at Kita from 2006 to 2009, he had witnessed local protests over the loss of kosso after a five-year extraction contract was awarded by the national Government to a foreign firm.

According to the respondents, when the ban was issued, 405 containers of kosso logs were queued in Bamako, and another 200 in Kayes, where containers full of squared 2.1 metre logs were being loaded onto trains destined for Dakar, the preferred port of export for Malian timber at that time. If the owners could prove they had paid the required taxes, they were allowed to export the stocks until the end of the year. Some surplus stocks were sold to local processors.

One buyer of the surplus stocks, the owner of a wood-processing factory and a member of the Wood Exporters Association, was interviewed. He reported that the Association had put pressure on the forestry department to pass the log export ban introduced in July 2014. He referred to the traders buying kosso logs in Mali as a “mafia” that bribed local leaders with gifts and cut and exported the logs illegally. He said:

We are not losing this chance for Malians to the Chinese. When our forests are finished, they will leave, but where can we go? ... For our industry, big trees are valuable. We don't use small trees. We leave those for the next harvest. But the Chinese left nothing.

There may also have been a personal element to the 2014 ban. It was issued just after the appointment in January 2014 of a high-level official in the Ministry of Trade and Commerce, who was also interviewed. He said that when he was appointed, halting the trade in rosewood was his first priority:

¹⁵ Decree No. 2014-2022/MC-SG of 29 July 2014.

In my village, the Chinese took all our rosewood trees, and in our area, we are all suffering now. The temperature has increased dramatically. People are suffering.

Despite those allegations, the Chinese import statistics show no timber exports from Mali before 2013, and minimal amounts since then (522 m³ in 2013 and 2,958 m³ in 2014).¹⁶ These volumes are less than the amount seized by the Government in 2014. In addition, the Chinese import statistics show no exports from Dakar, despite the consensus among the officials interviewed that the city is the primary export hub for Malian timber.

The prospects for the log export ban are marred by the same implementation issues that affected the species protection measures introduced in 1995. When interviewed in early 2015, a senior customs official in Bamako did not believe that the log export ban applied to squared logs, despite unequivocal language specifying that it did. Similarly, officials of the Export Promotion Council who were interviewed were not entirely sure that a ban was in place. It appears that the Chinese traders have taken the ban more seriously, however, since they had reportedly left the country after it came into force.

As the Assistant Director of the Ministry of Trade and Commerce succinctly summarized:

Even if they cut all of the Malian forests for export, it will never be enough to satisfy the demands of the Chinese market. Simply, their needs are too great and our forests too small. We should realize the numbers involved and just stop.

Burkina Faso

The inhabitants of Burkina Faso who were interviewed repeatedly emphasized the paucity of forests in their country. Indeed, the country is reportedly unable to provide for its domestic timber needs internally and therefore imports lumber from neighbouring countries. In recognition of this fact, the Government banned all commercial trade in timber in the country in 2005.¹⁷ The only exception made was for the export of firewood and charcoal by licensed vendors, the vast majority of which goes to the Niger. In addition,

¹⁶World Trade Atlas, citing the customs authorities of China.

¹⁷Joint Decree No. 2005-003/MECV/MCPEA of 9 March 2005.

kosso is one of 21 woody species protected since 2004.¹⁸ By law, trees of those species cannot be felled, let alone exported.

The respondents interviewed reported that, despite the law, the harvesting of kosso for export had started along the border with Ghana around 2011 and had spread from there to the rest of the country. According to the respondents, it was at that time that buyers from China and India, many based in Bobo-Dioulasso, would travel to local areas with partners from ECOWAS countries and arrange for local people to supply the wood. The Director of the Provincial Office for Houet Province reported that, in Bobo-Dioulasso, some Chinese people had rented an area in the industrial park where they were squaring round logs and organizing their loading into containers.

According to officials and traders interviewed, those foreign traders were generally the exporters, whereas local people were relegated to subordinate roles in the trade. Although some traders from ECOWAS countries, who were already involved in trading gold and other commodities and had access to transport and logistics networks, were reportedly buying and reselling on their own behalf, it appears that most were simply supply contractors for foreign buyers at the ports. In addition, while some inhabitants of Burkina Faso were hired as labourers, it appears no one was compensated for the loss of the wood.

It appears that the harvesting took place essentially unnoticed for a number of years, because customs officials were not accustomed to seeing timber exports from Burkina Faso and may have been unaware of the forestry laws. In October 2012, however, the authorities of Ghana notified their counterparts in Burkina Faso that 6,000 tons of kosso from Burkina Faso had been seized at the port of Tema. Even though the authorities of Burkina Faso were unable to respond in time to stop the shipment, the incident prompted an investigation into the harvesting and trade in kosso in the country.

According to records collected in the field, since 2012, at least 28 seizures of kosso have been made in Burkina Faso, involving almost 10,000 tons of wood. Interviewees reported that, by 2013, most of the foreign buyers had left the country, but reportedly still controlled the trade from port States. One senior provincial forestry official reported that, in March 2013, in connection with one of the seizures, he had met with members of the *Association Song Taaba des Exploitants de Produits Forestiers du Faso*, a group of some 50 loggers, all working to supply a single Chinese dealer based in Bobo-Dioulasso, who provided them with credit. After the dealer had been questioned, he had disappeared from the country and had not been seen since.

¹⁸ Decree No. 2004-019/MECV of 7 July 2004.

According to officials interviewed, in February 2015, 23 forestry officials across the country at all levels were dismissed for their involvement in the illegal trade of kosso, including the former national director and a number of regional directors.

Because it has been illegal to export logs originating in Burkina Faso out of the country since 2005, it appears that some wood is smuggled across the border into neighbouring countries, then reimported as wood of foreign origin. Accompanied by documentation of foreign origin, the wood could thus be exported from the country along a number of routes. Customs officials in both Burkina Faso and Mali said that normally they would not stop products with a certificate of origin from another ECOWAS State. As a former director of forestry commented:

Sometimes you can see that the transporters have wood on their trucks, which they always say comes from somewhere else, not Burkina Faso, but really it is from Burkina Faso.

In addition to this scheme, it appears that Burkina Faso may have become a transit country for illegal timber from north-eastern Côte d'Ivoire and northern Ghana.

Togo

Togolese law has lagged behind that of many other port States in the region, leaving the country vulnerable to exploitation by traffickers. The officials interviewed were aware that rosewood was being exported through their ports, but many assumed the wood was simply being trans-shipped, because they did not perceive their forests as being capable of supplying large volumes of wood. Reflecting that perception, the Forest Code of Togo of 2008 allows for the designation of protected species, but, according to interviews conducted in 2015, no list of protected species had yet been promulgated. Species-specific protection was finally provided on 21 May 2015, when an executive order prohibiting the transport of kosso wood was issued.¹⁹ This rather unusual focus on domestic transport does allow the prevention of both illegal logging within the country and trans-shipment of illegally acquired wood through the country.

According to respondents, the harvesting of kosso in Togo reportedly began as far back as 2007, although, according to Togolese officials, the country

¹⁹Memo No. 0251 MERF/SG/DRF, issued on 21 May 2015.

does not have any commercially viable forests to speak of, particularly in the drier areas of the country in the north, where kosso is found. Togo does have teak farms, the output of which is exported primarily to India. According to the authorities interviewed in the Ministry of Environment and the Department of Forestry, the kosso exports are destined for China. Comparing the monthly export statistics of Togo with the monthly import statistics of China, it becomes clear that exports from Togo labelled as “other” timber refer to kosso. But the number of containers reportedly exported by Togo is much smaller than the number reported in the import statistics of China (see figure II).

Figure II. Reported exports of kosso from Togo to China compared with reported imports into China of rosewood from Togo, 2011–2014



Source: Export data from the Ministry of Commerce of Togo and import data from China.

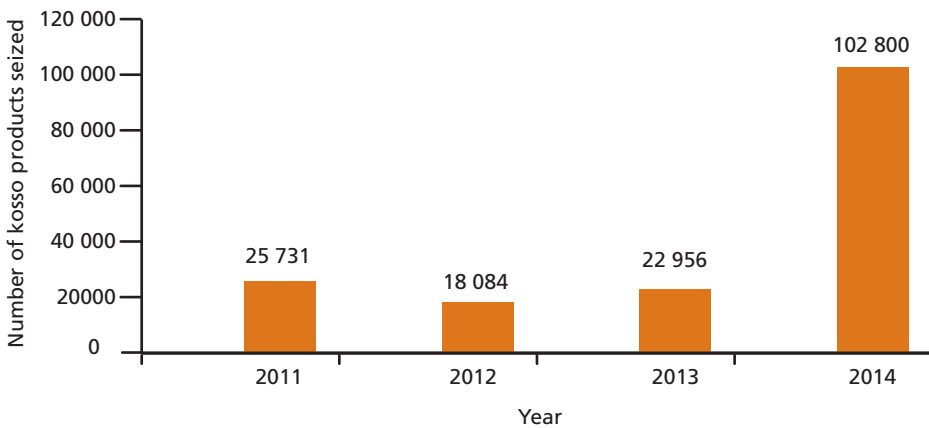
* Includes both logs and sawn wood.

The officials interviewed suggested that much of the wood exported from Togo was actually from Ghana, where timber regulations have been tighter. As in Mali, the officials admitted they had been unable to recognize legitimate export documentation, at least until they had met with the Ghanaian authorities in November 2014. But those same officials were surprised to learn of the extent of kosso logging in countries such as Mali and Burkina Faso, and it may be that they have underestimated the extent to which kosso exports labelled as Togolese in origin are, in fact, from Ghana.

As in other countries along the Gulf of Guinea, the kosso in Togo is concentrated in the arid northern parts of the country, far from the capitals on the

coast, which makes monitoring of the situation difficult. There has not been a forest inventory since 1980, although the officials interviewed thought that stocks of kosso had been heavily depleted, and few trees remain outside protected areas. Several large seizures of illegally cut kosso had been made, but the records of those incidents do not adequately document the quantities involved, capturing only the number of “products”, which could refer to logs, planks or any other form of the wood (see figure III). Nonetheless, the records show that kosso has been, by far, the most commonly seized wood in the country.

Figure III. Number of kosso products seized by Togo, 2011–2014



Source: Ministry of Commerce of Togo.

Since becoming fully aware of the problem, the Government of Togo has imposed 11 specialist checkpoints along its land borders and a container monitoring scheme in its port. The head of the Togolese container monitoring programme reported that seizures were only made when there were deficiencies in documentation, although there were suspicions that some of the documentation presented was fraudulently acquired from corrupt local forestry officials. Inter-agency cooperation had also increased, with constant communication between environment and enforcement officials.

One judge associated with these efforts reported that the entire area of wildlife and forest crime needed a legal and situational review. He suggested that the present system of permits was being abused, saying, “with a licence, you

can destroy a forest". He further said that, at the current time, there was no legislation pertaining directly to forest crime, and that he was not aware of any convictions for illegal logging or exports. Even with a creative interpretation of the existing law, the greatest penalty that could be expected was approximately \$4,100, which was about the cost of a single container of kosso. Furthermore, without an investment in investigative capacity, the penalties would only be levied against the lowest-level functionaries in the illegal timber market.

Benin

In contrast to Togo, the law in Benin clearly makes the export of kosso logs illegal. Since 1996, kosso has been listed as a protected species.²⁰ In addition, since 2005, the export of wood in the raw has been prohibited in Benin.²¹ Although some aspects of the law are ambiguous, interviews with dealers in Benin revealed a general understanding that the trade in kosso logs was illegal, and that bribery was required for timber transport to be successful. That perception may explain why such smuggling was found to be far more sophisticated in Benin than in the other countries surveyed.

For example, Benin is the only West African country to export sawn rosewood to China, according to the import statistics of China. This anomaly is allegedly attributable to the fact that sawn wood is used to conceal log shipments in Benin, as reported by multiple sources, including loggers, timber traders and workers, and community members. Once a container is filled with squared logs, a barrier of sawn planks is stacked at the container door. During the field research, such planks were seen alongside logs on site at kosso processing facilities.

In Benin, it was possible to conduct field investigations, including visits to logging sites, processing centres, markets and the port. Community members in the logging areas, the loggers themselves, transportation agents, lumber yard workers, wood traders and forestry officials were interviewed.

²⁰ Decree No. 96-271 of 2 July 1996, laying down the terms of application of Law No. 93-009 of 2 July 1993. As set out in article 36 of Law No. 93-009, "the felling, limbing, uprooting and mutilation of the forest species listed above is prohibited, except as allowed by the forest administration".

²¹ Decree No. 2005-708 of November 2005; Interministerial Decree No. 2007/0053/MEPN/MIC/DC/SGM/DGFRN/DGCE. Article 5 of the Interministerial Decree of 2007 specifies that poles, posts, squared logs, thick planks, rough-sawn boards with sapwood and charcoal from natural forests are all considered raw wood.

Community members in the logging areas said they regarded the forests as the property of the State, but local authorities often licensed their harvest. In one village, community members reported that the local chief had received some kola nuts from the loggers in exchange, while in others, a set price per truck was established. The younger men interviewed said they had received finders' fees for guiding loggers to kosso or had been hired occasionally to perform minor tasks. One village chief stated, "We are not interested in these trees or what the people are doing with them. These trees have no value for us. They have been here 100 years or more and we never got anything for them."

The loggers interviewed said that they worked by commission, but that it was also possible to start cutting on one's own account. One said, "Either a customer comes to you and tells you what they want or you enter the bush and start cutting and people will come and find you to purchase your logs." In either case, money was needed for the transport to begin. The loggers reported that, once the kosso was located and the logging was initiated, they would then contact the forestry officials and pay them for what they intended to move. The standard split was 60 per cent of the purchase price to the loggers and 40 per cent to the forestry officials. The forestry officials reportedly never visited the cutting sites.

Visits were made to two sites north of Cotonou where the wood was processed, stored and exported. The Chinese-run facilities were surrounded by three-metre-high wood fences that entirely blocked the activity inside from view, and all those interviewed clearly understood that the trade was illegal. Two main facilities were reviewed: a log storage and loading complex and a plank smoking site at Dako, a town 130 km north of Cotonou and approximately 10 hours south of cutting areas such as Parakou. The facility in Dako had apparently been in existence for about three years, and the Chinese group that operated the site had been referenced in interviews elsewhere. At least 350 metric tons of kosso was observed in just one yard. Logs were brought to the site by both commissioned loggers and by log traders who bought the logs on their own behalf in the north. Both loggers and traders reportedly needed to have a connection to forestry officials to move the timber within the country. Failure to pay off forestry officials meant the logs could be confiscated en route to being exported.

The community members were apparently supportive of the business, in contrast to the situation in Mali, because of the ability of the Chinese to organize such an economically productive activity. One interviewee stated, "The Chinese here have the money and means to do this business, so the local communities are supporting and assisting them." The group running the facility

in Dako had even won the loyalty of the local population over other Chinese groups. One interviewee recounted how a rival group had attempted to set up operations in the area. The group's entire stock of logs had been stolen at night and the incident had frightened them away. The locals knew that the business was illegal, so they were wary of new operators who might not have the connections or the savvy to operate safely. The community appeared to prefer dealing with the established group, so as not to attract unwanted attention.

In the same town, researchers were able to interview an employee of a Chinese-owned kosso smoking yard. The employee recounted stories of how interlopers who failed to secure the right connections could have their wood confiscated and be driven from the country. The bribes required were apparently substantial, because the senior official who received the bribe was required to distribute the proceeds to everyone in his chain of command.

Kosso planks are smoked to preserve the wood, which provides some form of added value. Stacks of planks are arranged to create six-metre-high towers that are covered with plastic to retain the smoke. The wood is continually smoked by means of an internal fire for six weeks. With loads of smoked wood as cover, larger shipments of logs can be transported to the capital unnoticed. The planks are then stacked at the doorways of 40-foot containers to conceal shipments of logs. This smuggling technique seems to be particular to the group running the yard, and they have apparently also found a market for the smoked planks.

One trader interviewed in Dassa (about three hours north of Dako) was accompanying three trucks from the north of Benin destined for buyers in Cotonou. The trader said that he had been involved in the same trade in Nigeria. In contrast to the workers interviewed in Dako, he said, "What the Chinese are doing here in West Africa is robbery and how they are making us work is like slaves." Loggers interviewed were aware that what they were getting paid was a fraction of the export price, and some were resentful of that arrangement, but lacked alternatives.

Only certain transportation companies that understood how the smuggling worked could be used to move the wood. For example, it was reported that forestry officials did not work on weekends, thus weekends were a key time for loading containers in the ports. The 40-foot containers were loaded with squared logs in the back and planks (often very thick) in the front at the doorway. Forestry officials reportedly did not have a budget to unload a container of wood once fully loaded, nor to cover the possible costs associated with a delay in shipping, so the visual barrier was effective.

At the time of interviewing, there were only five forestry officials in the main port. According to the import statistics of China, 194 containers of wood per week (of which 50 were reportedly kosso logs) were exported from Cotonou in 2014. To keep pace with that rate of export, inspectors would have to witness the loading of four to eight containers per day at sites across the city. In practice, they only detain about three containers per week. The director of the department responsible for forestry regulations and laws said, “We don’t have control here. That is the difference between Benin and China. The only real data we have is the people we stop and the goods we seize.”

As in other countries, forestry officials in Benin suggested that a good deal of the wood departing from their port that was alleged to be of foreign (mostly Nigerian) origin was, in fact, wood originating in Benin. The legal status of the alleged exports of Nigerian wood was ambiguous because, as detailed in the following discussion, the legal status of Nigerian kosso is complicated and varies by state. The documentation involved is diverse and even the Nigerian officials interviewed seemed confused by it.

Nigeria

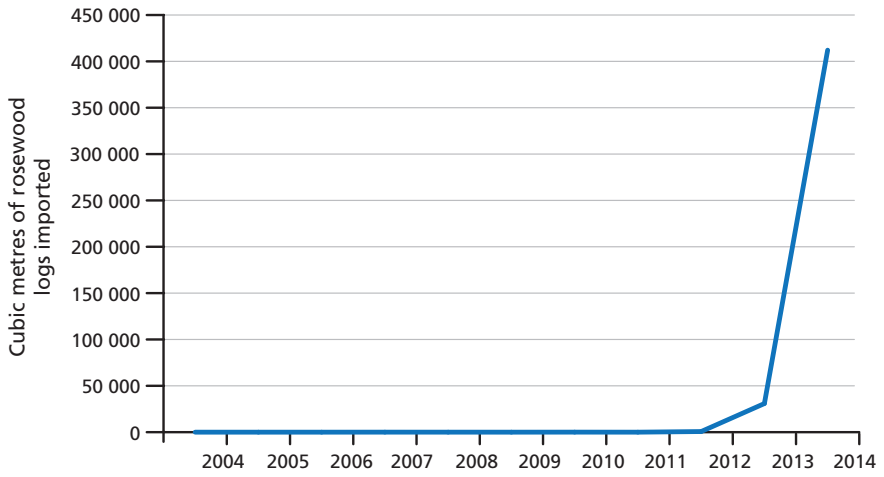
Nigeria has experienced heavy deforestation in the last 25 years but was never much of a timber exporter until recently. According to UN Comtrade – International Trade Statistics Database, Nigeria exported only \$2.2 million worth of logs in 2013. A much larger share of exports has been accounted for by charcoal, derived from undifferentiated species found in wild forests. The UN Comtrade Database values the charcoal exported in 2013 at \$76 million. In 2012, a former deputy director of forestry estimated that 51 per cent of all timber production in Nigeria was illegal.

In 2014, Nigeria suddenly appeared as a major log exporter (see figure IV). That year, it exported over 400,000 cubic metres of kosso, making it the single largest exporter of the wood in the world, and the second largest exporter of rosewood overall. One timber dealer interviewed in Nigeria stated, “Between 2013 and 2014, people didn’t know the importance or value of this species. Now it is like a hotcake business. Everyone wants it.”

Field research revealed great disarray with regard to the Nigerian policy on the harvesting and export of kosso, including a number of senior officials with very different opinions on current procedures. Nigeria is a federal republic, and each of its 36 states has considerable autonomy in regulating its own forests. The Federal Department of Forestry provides policy guidance to the state administrations, but it does not maintain records of the laws and

regulations of the states, and it does not itself regulate any forest areas. Nigeria also has a National Environmental Council, but its role is primarily advisory. Its recent recommendation to ban charcoal exports, for example, was ignored by the Government. The current national forestry policy dates from 2006. There is a national protected species list, but it does not include kosso.

Figure IV. Volume of imports into China of rosewood logs from Nigeria, 2004–2014



Source: World Trade Atlas, citing customs statistics of China.

According to a number of sources, there is also an active roundwood export ban,²² but there is considerable difference of opinion among experts as to what it includes. Federal forestry officials and the Nigeria Export Promotion Council report that squared logs are considered “worked”. However, that contradicts information on the website of the Nigeria Customs Service, which lists “Timber (rough or sawn)” on its export prohibition list.²³

Similarly, the Export Comptroller at the ports of the Apapa area in Lagos stressed that wood exports were illegal and that no Nigerian wood passed through his port. Both the Nigeria Export Promotion Council and the pre-shipment inspection firm Cobalt International Service have contradicted the Export Comptroller in that regard, asserting that Nigerian wood products are indeed exported through Apapa.

²²FAO, “Present status of the forestry sector of Nigeria” (2001). Confirmed by the World Resources Institute; see Forest Legality Initiative, “Logging and export bans: Nigeria”, May 2016. Available at <https://forestlegality.org/>.

²³Nigeria, Federal Ministry of Finance, Nigeria Customs Services, “Export and prohibition list”. Available at www.customs.gov.ng/.

Several traders complained that so much kosso was passing through the ports of Lagos that, at several points in 2014, the port authorities had begun to refuse additional containers, because there was simply no room for them. The traders also asserted that opinions about whether squared logs counted as “worked” had varied over time. One trader compared the kosso trade to gambling, explaining, “You are not sure if you enter into it that you will get your containers through the ports.”

Given this disarray in national policy, the real regulatory power appears to remain with the states. According to a wide range of respondents interviewed, 23 out of Nigeria’s 36 states have been affected by the illegal kosso trade.²⁴ Kosso appears to grow in Nigeria under a much wider range of climatic conditions than in the other states reviewed, extending into the tropical forests in the south-east of the country, which seems to explain why such a wide range of states has been affected. The researchers were shown records of past kosso harvests in Cross River State, a tropical area. They observed that the logs for sale were smaller than those found elsewhere, however, and some specimens that were being sold as kosso might actually have been of other species.

The approach taken by each state to trafficking in kosso differs greatly. Responsibility for forest governance can be vested in a range of state ministries, including those responsible for natural resources, the environment, agriculture and water resources, or in a dedicated ministry of forestry. Some states have completely banned commercial forestry, while others have no rules at all governing the harvesting of kosso. For example:

- In Kano State, whoever owns the land owns the trees, and may do with them what they like.
- In Plateau State, there is no specific law on kosso.
- In Kaduna State, kosso can be logged under licence, although authorities have estimated that half the harvest is unlicensed.
- In Kogi State, kosso can be logged under licence, but a moratorium was imposed from March to May 2014 after large numbers of Chinese buyers were kidnapped by rival groups; the kidnapping spree also precipitated a ban on Asian or Caucasian people entering the forest.

²⁴ Including the States of Adamawa, Bauchi, Benue, Cross River, Ebonyi, Ekiti, Enugu, Gombe, Kaduna, Kano, Katsina, Kebbi, Kogi, Kwara, Nasarawa, Niger, Ondo, Osun, Oyo, Plateau, Sokoto, Taraba and Zamfara.

- In Taraba State, kosso is a protected species; so, only two licensed sawmills located in the state were technically allowed to harvest it, but the maximum fine for illegal logging was approximately \$250.
- In Cross River State, all commercial logging is forbidden, regardless of species.

The patchwork of different policies makes it extremely difficult to determine the legal status of any given tree. Once felled, lumber may be moved freely within the country, and there is no way to discern the legal regime under which it was harvested. Researchers also found differences of opinion between senior officials on national policy issues, such as the documentation required for timber export. It appears that the kosso trade is largely dependent on the particular officials authorizing the export.

The state and district officials interviewed seemed to view licensing as a way for the state to capitalize on a process that was occurring anyway, not as a way to regulate the trade within sustainable limits. Much of the licensing occurred only after the logs had already been felled, at roadblocks along the transport routes. As one official from Kaduna commented, “If we didn’t do this [issue licences after the fact], they would go in the night, cut the trees anyway, remove it and we would never see them again, and ultimately the state would not be able to collect anything.” Although officials were technically required to inspect harvests on site to confirm the quantities taken, it was impossible to do so because the number of harvests was too high for a mere handful of officials to monitor. On-site inspections also posed a security risk, as rangers had been killed by armed logging gangs. Indeed, officials in Plateau State requested that forestry personnel be armed and provided with danger pay, and that their families be compensated in the event of their violent death at the hands of illegal loggers.²⁵

The most efficient way for the state to collect on the unstoppable outflow was to set up roadblocks, and officials of Kaduna had requested federal assistance in that regard. Military and police assistance was engaged, and vigilante groups also participated. Trucks with non-compliant loads were fined (typically about \$50) and subject to taxation, but the trucks were allowed to proceed once the fine money had been transferred. Even if the logs had been illegally felled, the shipment was effectively legalized through that process.

²⁵Violence against rangers was also reported in other parts of the country. A senior forestry official in Taraba State reported that his employees had been beaten by logging gangs in 2014.

However, that impromptu control system was also undermined by corruption. One Lagos-based trader described his experience paying forestry officials, saying, “[They call them] bush taxes, royalties or something. Yes, we pay the forestry guys. They are very active in that regard. Whether it actually goes to the state or they keep it themselves, I don’t know.” According to the interviewees, those most concerned about the prospects of enforcement simply sought licences for other species (typically *Khaya senegalensis*), then concealed the kosso under loads containing those species.

Taxing the trade once the wood is already on its way to buyers is a poor substitute for stumpage fees because it fails to capture all the undersized wood that is later rejected by buyers. As traders in several countries reported, the Chinese buyers were only interested in the core of the wood, and undersized trees were generally discarded unpurchased. In Kogi State, the traders reported that so many small trees had been cut and rejected that a Chinese man had set up a temporary sawmill for 12 months, milled all the undersized logs, then exported them.

It appears that, once past the roadblocks, all timber roads lead to Lagos. In Cross River State, all logging has been banned since 2009. In addition, the port at Calabar is heavily silted and can no longer accommodate large vessels. For these reasons, it does not appear that illegal wood is being exported from Calabar. Port Harcourt is similarly silted, and it appears the situation at Sapele and Warri is the same.

The epicentre of the trade, therefore, must be Lagos. Even traders and illegal loggers operating in Taraba State, which lies on the border with Cameroon, reported that they brought their logs to Lagos for export. It appears that the small town of Sagamu is the major centre for trading and loading kosso logs into containers for onward delivery to Lagos.

Nigerian timber dealers are often from the kosso source areas, or at least are of the same language group as those in the source areas. They rarely travel to those areas, however, instead employing agents to do so. Those interviewed were not always entirely sure where their logs came from, although they were able to identify which states still had supplies of kosso (e.g. Kogi State) and which had run out (e.g. Kebbi State). Nigerian timber dealers were also very active in online sales, shipping logs not just to China but also to Thailand and Viet Nam. Export inspectors interviewed noted that quite a bit of kosso was not labelled as such, but rather was simply tagged as “processed wood”.

Federal officials interviewed in Nigeria remarked that the situation regarding kosso was similar to what had happened with teak 20 to 30 years earlier.

Traders had realized the value of the wood in India, and by the time the Government had recognized the scale of the problem, it was too late: the species had been decimated.

Conclusion

Timber regulation is problematic for several reasons. It is extremely difficult for law enforcement agents, such as customs inspectors, to distinguish between species of wood in the many forms in which it may appear. Factors such as moisture content, exposure to heat and the elements, natural variation and processing technique can radically affect the appearance of wood. Without DNA evidence, even experts can find it challenging to distinguish between closely related species. Indeed, the taxonomy of plants is a matter of continual debate, and scientific consensus on the classification of species is liable to change.

It is also very difficult to regulate trade that is based on non-standard documentation. Some of the fraudulent documents inspected in the course of the fieldwork for the present study were entirely invented, bearing no resemblance to the official permits. The origin of the wood was concealed by means of such documents and a series of exports and reimports. As a senior official of the Ministry of Trade and Commerce of Mali commented:

We cannot do anything about those transited containers; if they have legal documents, we have to accept them and allow them to pass. It's very difficult for us to know real and fake documents from these other countries. If we do detect illegal documents, we will stop them, but in reality, we really can't tell the difference.

During the fieldwork, documents were presented by officials in which the product was clearly misdescribed, with incorrect Harmonized Commodity Description and Coding System (HS) codes. The destination of the documented shipments was predominately China, although Indian buyers were noted in Bobo-Dioulasso, and a Chinese-owned firm in the United Arab Emirates was also implicated.

The fieldwork also repeatedly revealed differences of opinion among senior officials on the content and meaning of the law. When interviewed in groups, officials often debated with each other about the basic requirements for wood exports. One frequent topic of contention was whether the rough squaring of logs—which removes unmarketable surface wood and increases packing

efficiency—satisfied legal requirements that wood should be worked before export. Since rough squaring only works to the benefit of the importer and does not retain any value added in the source country, it should not be deemed sufficient to circumvent a log export ban.

The extent to which buyers directly commissioned logging activities seemed to vary by area and across time. In some places, Chinese buyers were stationed in the field, negotiating with local leaders and fully equipping the loggers. In others, local loggers cut on their own behalf, confident that dealers could be found to purchase their logs and transport them to Chinese buyers in the port cities. Some communities seemed apathetic about the removal of the logs, happy for any windfall that came their way, while others were more aggressive, demanding that local labour be used and charging stumpage fees, however nominal. In some cases, the threat of local law enforcement or community unrest drove the buyers from the field and even from the country, but middlemen quickly emerged to fill the void.

The free trade zone within the ECOWAS region also complicates the picture. As individual countries impose restrictions, wood sourced in those countries is simply passed off as coming from another jurisdiction with fewer constraints. Therefore, coordination within ECOWAS is essential for any kind of commercial regulation to make sense.

Timber is often regulated locally. Officials in close proximity to the cutting sites are often deemed to be in the best position to judge whether the logging done at those sites is equitable and sustainable. But such decentralization can lead to corruption, as discretion can be influenced, and there is little monitoring of the decisions made locally. Repeatedly, people active in the illegal logging trade said that having a connection to the local forestry officials was essential, as only they could assure delivery as promised. Another issue was lack of capacity, especially in areas that had never experienced large-scale logging before, and intimidation by armed traffickers also played a role.

Fortunately, following the exponential growth in exports leading up to 2014, it appears that demand for kosso has begun to decline. Even at the time of the interviews, timber dealers were complaining about cancelled orders and declining prices due to an oversupply in the market, and this is reflected in the declining trade statistics for 2015 and 2016. The listing of kosso in appendix II to CITES is likely to further dampen the market, although the damage already done has yet to be assessed.

In the end, the trade in natural resources in West Africa cannot be regarded as a purely commercial endeavour, given the gross disparities in capacity between

the buyers and the sellers. There are many situations in which commercial transactions, despite being voluntary, are nonetheless considered contrary to the public interest. The sale of West Africa's forests is one such transaction.





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