

# SUMMARY AND OVERVIEW

Four years have passed since the first *World Wildlife Crime Report* was published in 2016. In the interim, there have been significant changes in both the policy environment and the illicit markets. If anything, trafficking of wild fauna and flora has grown in importance in the public consciousness and has risen on the political agenda, as it becomes clear that wildlife crime has negative implications for climate change, preservation of biodiversity, security and public health. In response, controls have tightened in a number of wildlife markets since the first publication, including those for rosewood, ivory, and pangolins.

As in the previous Report, this edition draws heavily on the seizure data compiled in UNODC's World WISE database. This database has grown, currently containing just under 180,000 seizures from 149 countries and territories.<sup>1</sup> Contributing to this growth is the new CITES illegal trade reporting requirement. Each October since 2017, CITES Parties have been required to submit data on all seizures of wildlife made in the previous year. As an ICCWC partner, UNODC has been maintaining these data and analysing them when permitted to do so by the relevant CITES Party.<sup>2</sup> Thanks to this process, the UNODC World WISE database now has strong coverage for seizures that took place in 2016 and 2017. Seizure data for 2018 have also been included for some countries, after their review.<sup>3</sup> There are inherent limitations on the uses of seizure data, and not all seizure data are of equal quality. With these limitations in mind, World WISE is used cautiously in this report.

The nature of this CITES-oriented data source affects the scope of this report. CITES lays out rules for trade in over 36,000 protected species, and it requires its parties to penalise trade in violation of these rules. But there

are many crimes affecting wildlife that have nothing to do with these species. For example:

- the millions of species that are **not listed by CITES** may be illegally harvested and traded internationally, as is frequently the case in timber and fish trafficking;
- CITES is limited to regulating international trade, so the illegal harvesting of wildlife, such as the **poaching** of protected species, does not fall within its scope if the product is not transported internationally;
- **domestic markets** for wildlife are also beyond its jurisdiction, whatever the source of the wildlife, so long as the products concerned cannot be proven to have crossed borders in contravention of CITES rules.

Thus, by focusing on CITES-related seizures, the core data used in this report do not cover all aspects of

wildlife crime. To better understand markets where illegal materials are feeding legal industries, legal trade data are used. In addition to these core data, additional research was performed for this report for a range of species. Making use of this additional research, other forms of illegal harvest and trade are considered where this activity is relevant to the markets examined. Consequently, for the purposes of this report, the term "wildlife crime" refers to *harvesting and trade contrary to national law*, particularly, but not exclusively, the national laws implemented in fulfilment of CITES obligations. This includes offences that might not attract criminal sanctions in some parts of the world.

The World WISE Database illustrates the diversity of wildlife crime. Nearly 6,000 species have been seized between 1999-2018, including not only mammals but reptiles, corals, birds, and fish. No single species is responsible for more than 5 per cent of the seizure incidents. Virtually every country in the world plays a role, and no single country is identified as

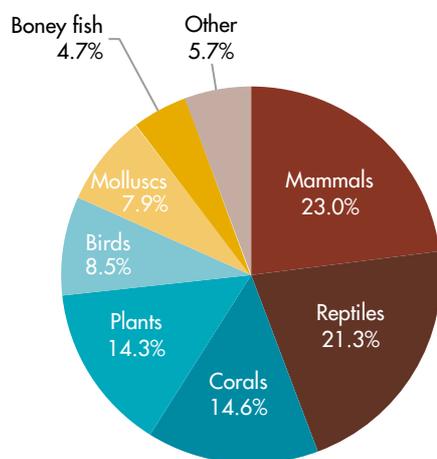
**Fig. 1** Number of seizures in World WISE by year



Source: UNODC World WISE Database

\* At the time the data processing for this report was finalized, the data collection for seizures made in 2018 was not yet complete.

**Fig. 2** Share of all seizure incidents in World WISE by taxonomic category, aggregated 1999-2018



Source: UNODC World WISE Database

the source of more than 9 per cent of the total number of seized shipments captured in the database. Suspected traffickers of some 150 citizenships have been identified, illustrating the fact that wildlife crime is truly a global issue.

A review of the data indicates that illegal wildlife markets do not correspond neatly to biological categories. Some markets make use of multiple species. For example, there are many tree species that are classified as “rosewood”, and collectors of rare reptiles intentionally seek out multiple species. In contrast, some species feed multiple distinct markets. For example, pythons are illegally taken for their use live as pets, for their skins to make handbags and shoes, for their meat as a food, and for their organs as a traditional medicine. As a result, the markets referred to in this report may

be comprised of multiple species or just part of one particular species. For the purposes of clarity and focus, they may also be limited geographically.

Using the relative valuation approach (see Box 2), changes can be seen over time in the shares of the total seizures that some key markets occupy. Between 2009 and 2013, rosewood was clearly dominant, rhino horns and pangolins represented only 5.5 per cent and 4 per cent of the total respectively, and agarwood also stood at 4 per cent. But between 2014 and 2018, rosewood’s dominance declined as the market shifted to new species. Both rhinos and pangolins comprised a much larger share of the total seizures than in the past, and agarwood seizures experienced a sharp relative decline.



### Box 1: Seizures as part of the evidence

Seizure data comprise an important part of the evidence presented in this Report. Seizure data, though, can be difficult to interpret in isolation and can lead to misleading conclusions because they are a mixed indicator, demonstrating both the presence of a problem and the initiative of the relevant authorities in addressing it. On their own, they cannot be used to demonstrate the magnitude and trend of the trafficking or shed much light on law enforcement capacity.

The value of seizure data comes not from what they say about the country making the seizure, but what they say about the whole supply chain. Whether transported by sea freight, air freight, personal courier, or post, it is often possible to determine where the contraband originated, transited, and was destined. Each seizure incident, therefore, has the potential to reflect on the entire trafficking chain, including the countries where the contraband went undetected.

In addition, a seizure allows a great deal of information to be harvested about the identity and methods of the traffickers when the confiscating authorities take the initiative to record these details. Aside from routes, the preferred methods of conveyance and concealment can be documented. The age, gender, and citizenships of those associated with the shipment can be recorded, as well as the laws used to charge them. Triangulated with other indicators such as price as well as qualitative research, they can provide a key data source for understanding the mechanics of wildlife crime.

The quality of seizure data recorded and reported by Member States, however, varies greatly in terms of completeness and coverage. Some seizure reports leave out key data, such as the source and destination of the shipment. The way products are classed and measured varies greatly between jurisdictions, and conversion ratios are needed to amal-

gamate the diverse products seized into comparable categories.

While seizures are an imperfect indicator, they have the potential to provide important insights when aggregated in sufficient volumes. They cannot be taken at face value or interpreted mechanically, but they represent concrete evidence of criminal activity that is otherwise obscured from view.

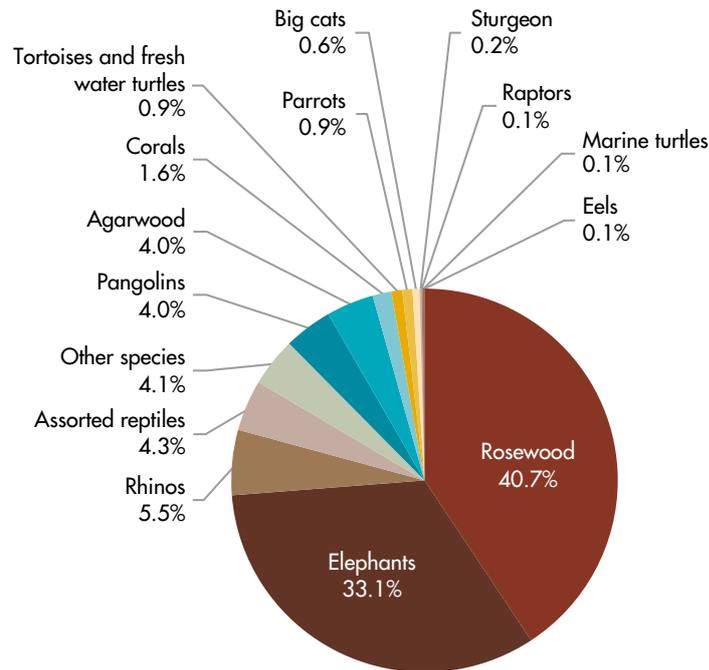
## Role of transnational organized crime

Some wildlife trafficking flows primarily feed illicit retail markets, while others feed into the licit trade. Legal industries can be contaminated by the introduction of illegal supply, and this vulnerability must be assessed to understand the criminal market. Each case study presented in this report lends special insights into the way wildlife trafficking is perpetrated, suggesting the drivers and dynamics of the criminal trade.

Illicit wildlife markets, and the traffickers that feed them, can be highly specialised. With regard to destination markets, considerable attention has been given to open street markets where a wide range of protected species-products are often openly displayed. These markets are a reality, but they cannot account for the volumes of wildlife illegally harvested each year. Based on the locations of the largest seizures, border town bazaars and back alleyways do not appear to be the venue where tons of fish, timber, and other wildlife products change hands. These volume commodities are usually marketed to specialists.

With regard to trafficking, there have also been seizures that suggest some groups are involved in smuggling multiple species. In just the last few years, detection of large quantities of ivory and pangolin scales in the same shipment indicate a clear confluence of these markets. But these are the exception rather than the rule, and, based on available information in World WISE, most shipments are of a single species. It is possible for the same trafficking group to move multiple commodities in separate shipments, of course, but the relative novelty of mixed shipments suggests that, as with dealers in destination markets, traffickers appear to specialise, trading in particular commodities where they know their buyers well.

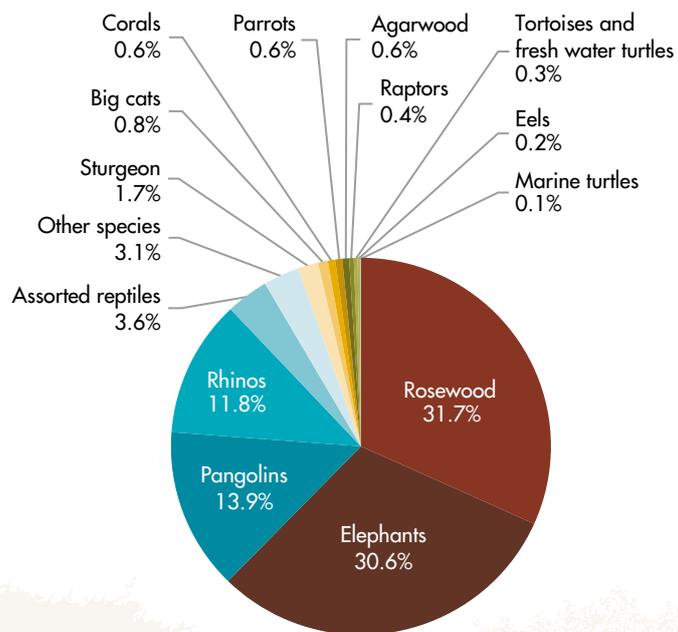
**Fig. 3** : Share of type of wildlife among total seizures (aggregated on the basis of standard value\*), 2009-2013



Source: UNODC World WISE Database

\* The distribution of seizures was calculated using a common metric based on the value of seizures. Over one million declared import values were statistically assessed and each seizure assigned a monetary value based on this dataset. See the methodological annex of the report for more details.

**Fig. 4** : Share of type of wildlife among total seizures (aggregated on the basis of standard value\*), 2014-2018



Source: UNODC World WISE Database

\* The distribution of seizures was calculated using a common metric based on the value of seizures. Over one million declared import values were statistically assessed and each seizure assigned a monetary value based on this dataset. See the methodological annex of the report for more details.

Information on the linkages between licit and illicit trade is important for targeting interventions to address the vulnerabilities of the licit trade and to strengthen the global regulatory system. In some case studies reviewed, it appears that the legal and illegal markets remain fairly distinct.

In other cases, the markets are entirely illegal. For example, rhino horns are products without a legal international market – zero trade is permitted for commercial purposes and there is no domestic market in range states. Similarly, there is no legal international market for pangolin products since all

species were put on CITES Appendix I in 2017, yet growing volumes are seized each year.

In other cases, such as rosewood and European eels, a large share of the illegally acquired wildlife is ultimately processed and sold in a legal market. By introducing illegal products into licit markets, traffickers have access to a much broader pool of potential buyers. The commodities have access to legal demand, because the buyers may be unaware of the illegal origin of the product. People buying rosewood furniture or eels may have no way to ensure that the origin of this product

was legal. In these cases, supply-chain security is of the essence in protecting vulnerable species.

Organized crime groups are flexible and can easily adapt to new restrictions, regulations and enforcement measures that may reduce opportunities to maximize profits. There may be many factors that make wildlife markets vulnerable to criminal infiltration. Policies, capacities and regulatory frameworks differ between countries, prompting criminals to turn to places where they can operate efficiently with low risk of punishment.

Illicit wildlife markets are like other illicit markets. With strong regulations and high demand, prices for the products go up, which can increase the profits of criminals. When efforts to curb the illicit trade do not impact both supply and demand, different types of replacement effects can be seen. Strong regulations in one place combined with high levels of demand can shift the criminal operations to less-regulated places or to the use of substitute species.

#### **From one country to another: geographic displacement**

Combating wildlife and forest crime has not usually been seen as a priority when addressing organized crime. Legislation may be weak and the level of detecting and addressing wildlife crime may be very low because of limited law enforcement capacity. Criminals tend to exploit legislative and enforcement gaps in countries that are less capable of addressing them, with the result that wildlife crime is displaced to these countries. This is the case, for example, with pangolin scale traders who choose to store their stock in the Democratic Republic of the Congo as opposed to other source countries due to a perception of lesser capacity for interdiction.



### **Box 2: Valuation of wildlife seizures**

To prioritise the use of limited resources, some quantification of the threats posed by the various wildlife trafficking flows is necessary. Looking at the number of times a particular species or region is implicated can give some general insights, but aggregating seizures is challenging because not all seizures are equal. Some comprise multiple container loads of illegal wildlife, while others involve a single item in the hand baggage of a traveller. Plumbing the depths of these data requires an additional element, something that takes into account the scale of the seizure. Once the relative significance of each seizure is weighed, a range of comparisons can be made. For example, the most significant species in trade, from a criminal markets perspective, can be identified. Together, just a few types of wildlife can account for just under 90 per cent of the total.

Comparing and aggregating wildlife seizures is complicated, however, because of the variety of products involved. For example, the seizure of a box of 10,000 dried seahorses is very different in every respect from the seizure of a shipping container of illegally harvested rosewood logs, or a suitcase with three rhino horns. They cannot be treated as equivalent by simply counting the seizure incidents. The number

of specimens cannot be counted: the wildlife is often processed before shipment, so the number of animals or plants involved is often unclear, and it would be unreasonable to equate a seahorse with a rhinoceros. They also cannot be compared on the basis of weight, since the crude mass of the wildlife in no way captures its significance.

The importance ascribed to a wildlife seizure depends on the purpose of the analysis. Organized crime is crime committed for material gain, and the extent of this gain is of great relevance for traffickers. Thus, to capture the criminal significance of a wildlife seizure, it makes sense to assign a monetary value to it. To provide this valuation, over one million declared import values were statistically assessed and each seizure assigned a monetary value based on this dataset. The valuation process is fully explained in the online methodological annex to this report. These values have been used not as a proxy for the true black-market price, but to act as a yardstick, giving a sense of the relative value of a seahorse to a rhino horn to a rosewood log.

### From one species to another: wildlife product replacement

Criminals can shift from protected species to alternative species that have a similar value in destination markets. This sort of species replacement is very common in wood markets, where even experts can struggle to distinguish between timber of related species. The dominant rosewood species has changed many times over the years, shifting from Asian to African species. Similarly, African pangolin species were targeted after regulations tightened and populations were overexploited in Asia. Leopard, jaguar and lion bones have also emerged as substitutes in the tiger bone trade. At times, these substitutions are explicit, but often the buyers are not aware that a new species has been introduced.

### From physical to online trade

Like many markets, trade in wildlife and wildlife products is moving online. For example, the illicit pet reptile trade increasingly involves the use of social media platforms. Criminals can be quick in switching online platforms whenever enforcement action is taken. This trade is particularly difficult to address due to its hidden nature, inconsistent regulatory frameworks, and limited specialised law enforcement capacities.

### From wild to captive: captive breeding

When no viable wild population exists, captive breeding has been seen as an effective solution for the preservation of species threatened with extinction, but captive breeding can be exploited by organized crime groups. Several countries allow captive breeding for commercial purposes with the responsibility to ensure that these businesses operate in line with national regulations. There is evidence that criminals have used some licensed breeding facilities to illegally supply the illegal trade in exotic pets, luxury products and ingredients for traditional medicine. For example, detection of illegal tiger products in countries with little or no remaining

wild tiger populations but large captive populations strongly suggests that the illegal trade involves these tiger facilities.

## Case study markets

If the 2016 Report represented UNODC's first global assessment of the state of wildlife crime, this edition represents a first assessment of trends. In several instances, these trends have been dramatic. Several markets surveyed in the first report are also reviewed in this Report, namely markets for illicit rosewood, ivory, rhino horn, and pangolin scales. In addition, this report includes discussion on a few new markets, including those for live reptiles, big cats, and European eel. Some previously covered markets, such as reptile skins, live parrots and agarwood, are not continued in this report, due to a lack of available new data.

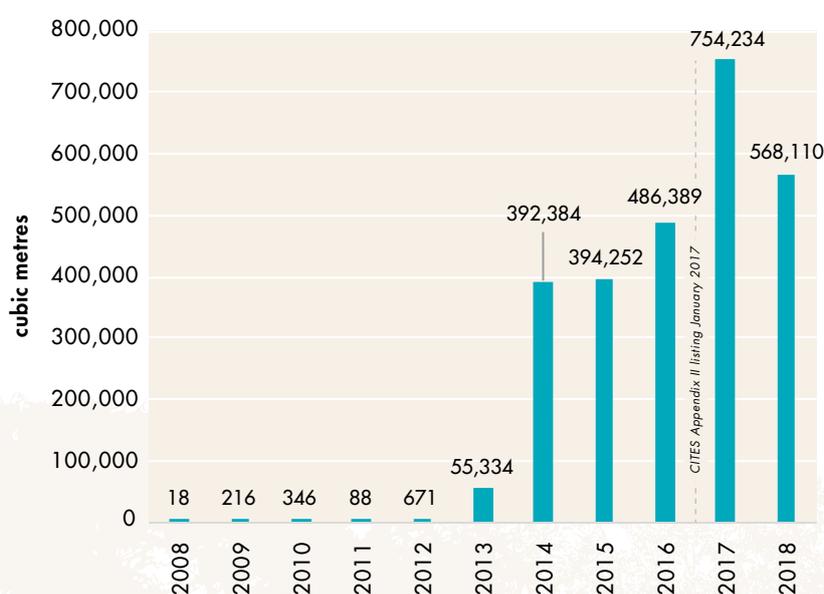
### Rosewood

When traded internationally, timber is a commodity sold and used in bulk, and the seizure data are dominated by

very large containerized shipments. Unlike illicit drugs, timber is not sold in acknowledged illegal markets, but rather fed into legal industries where its illegal origin is obscured. In fact, as the first Report highlighted, timber illegally harvested in one country may be legal to import into another. Countries are not bound to enforce the forestry laws of other countries. For this reason, both the legal trade data and the seizure data need to be considered in assessing the illicit flow.

Based on legal trade and seizure data, the largest flow of illicitly harvested rosewood in the past four years is coming out of Africa. The rosewood species featured in the last Report, *Pterocarpus erinaceus* (known in Nigeria as "kosso"), was listed on CITES Appendix II effective at the start of 2017. Remarkably, after this listing, more rosewood was exported from Africa than ever before, but this time with CITES documentation. Nigeria alone exported some 750,000 cubic metres of rosewood in 2017, which is equivalent to about four million trees, or over 30,000 shipping containers, an average of almost 100 container

**Fig. 5** Volume of kosso logs (cubic metres) exported from Nigeria and imported by Asian countries, 2008-2018 (trade suspended October 2018)



Source: World Trade Atlas, UN Comtrade

loads exported per day. This continued apace in 2018. Because Nigeria was unable to produce a scientific non-detriment finding, a recommendation to suspend trade from the country was issued by CITES in October 2018.

With the imposition of controls on *Pterocarpus erinaceus*, a number of alternative African species suitable as rosewood substitutes have been exploited. Some of these substitutes were listed by CITES in 2019. *Pterocarpus erinaceus* itself has been exploited as an alternative to depleted Asian rosewoods. Even as CITES listed the entire *Dalbergia* genus in 2016, alternative genera were being targeted. Timber traders appear to be continually searching for substitute species to exploit internationally, working both within and outside the law.

### Ivory and rhino horn

Perhaps the most revolutionary policy change in the past four years occurred in the trafficking of ivory, as several of the largest legal domestic markets were sharply restricted. Around the same time, several indicators suggested the illicit market went into sharp decline. The relation between these two trends requires further investigation, but it is possible that the loss of the legal market undermined investor confidence, flooding the market with more ivory than required by retail demand.

Data on poaching and trafficking indicate that the ivory supply saw a resurgence around 2007 and grew steadily until around 2011, declining until 2016, and stabilizing at much lower levels in the following two years. Prices in both East Africa and Asia appeared to have risen from 2007, peaked around 2014, and to have declined dramatically in the following years. Similarly, rhino horn poaching appears to have risen from 2007, peaked in 2015, and declined every year since that time, with prices also declining during this period. Prices

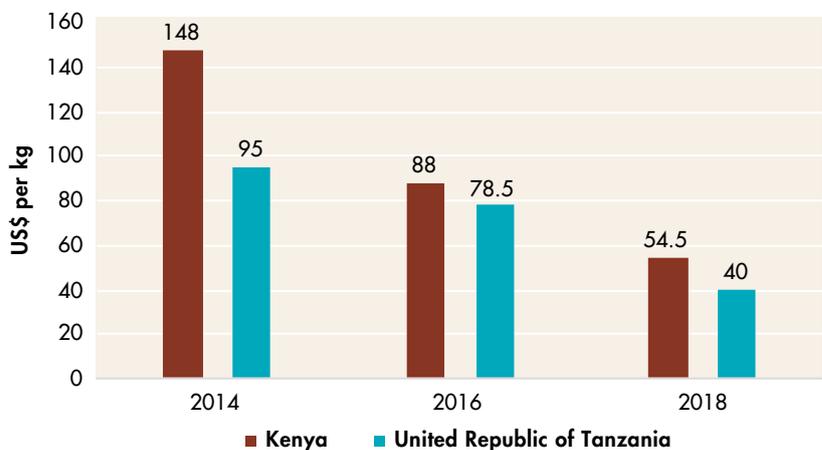
currently paid for rhino horn in Asian markets are a fraction of those cited in the popular press. It had been suggested that raw horn was worth US\$65,000 or even US\$100,000 per kilogram around 2014-2016, while field monitoring suggests the 2019 price was closer to US\$16,000.

The simultaneous decline in poaching and prices suggests that these illicit markets are contracting. It is possible that stockpiles are being tapped, reducing the need for poaching, but

the associated decline in price indicates current supplies exceed demand. Some very large seizures of both ivory and rhino horn were made in 2019, which is likely to be a record year once all the data are in. Unless indicators emerge of renewed poaching, the source of this ivory was likely stockpiles, exported before prices decline further still.

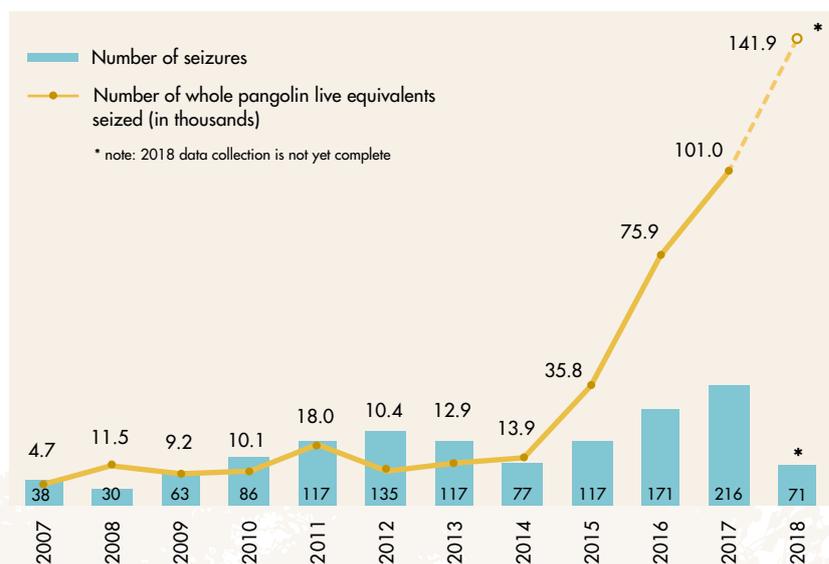
Seizure data also show a dramatic reorientation in the routing of ivory. While East Africa (particularly

**Fig. 6** Ivory prices paid to poachers in Kenya and the United Republic of Tanzania, 2014-2018



Source: UNODC fieldwork

**Fig. 7** Number of whole pangolin equivalents seized and number of seizures annually, 2007-2018\*



Source: UNODC World WISE Database

\* The specimen types included for this analysis are live, bodies, scales, meat, and trophies.

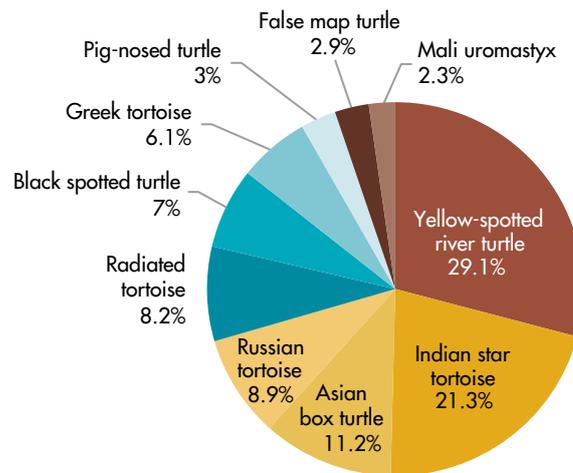
Mombasa, Kenya) was the primary source of illicit shipments in the past, Nigeria has become a dominant collection and transit point over the last four years. Similarly, while China dominated in the past, Viet Nam has emerged as the primary destination of these shipments. In addition, large mixed shipments of ivory and pangolin scales have risen in prominence, suggesting experienced ivory traffickers are using their expertise to move a rising illicit commodity

## Pangolins

Between 2014 and 2018, seizures of pangolin scales increased tenfold. The reasons for this increase are unclear. All species of pangolins were elevated to CITES Appendix I in 2016, but there was very little legal trade before this time. While the main flow has always been illegal, greater awareness may have produced a higher rate of interdiction as a growing number of customs inspectors learn to recognise pangolin scales. Still, the sharp and consistent increase in seizures of scales year after year, as well as the growth in the size of the largest seizures, strongly suggest an increase in the illicit flow. Attempts to farm pangolins for commercial purposes have failed, and the loss of millions of wild pangolins to illicit markets cannot be sustained. Individual seizures made in recent years have been comprised of the scales of tens of thousands of pangolins, indicative of highly organized criminal operations.

There has also been a shift in the nature of pangolin seizures over time, away from live and meat seizures (mainly of Asian species) and towards African pangolin scale seizures. Significant meat seizures continue to be made in Asia, but most seizures in recent years were of scales exported from Africa (especially Nigeria and the Democratic Republic of the Congo) to Asia (especially Viet Nam). Looking at a broader range of time, China has been the primary destination of pangolin shipments, so it appears that, as with

**Fig. 8** Share of top ten CITES-listed live reptiles seized, 2007-2017\*



Source: UNODC World WISE Database\*\*

\* Includes bodies.

\*\* The top 10 live reptile species seized represent 33% of all reptiles seized when looking only at bodies and live specimens.

ivory, Viet Nam has become a conduit for this larger market.

## Reptile pets

Reptile species are primarily traded for décor or fashion, for food, tonics, or medicine and for the pet trade and breeding. As the fashion industry has increased its support for conservation and sustainable use, live reptile seizures meant for the pet trade are becoming far more common than seizures of reptile skins. This is especially true for tortoises and freshwater turtles, which constitute nine out of the top 10 CITES-listed wild-sourced live reptile species seized in the last ten years. These species are sourced from a range of regions including South Asia, Central Asia, South-East Asia, East Africa and West Africa. East and Southeast Asia, followed by the United States and Europe, are their main destinations.

Tortoise and freshwater turtle are primarily trafficked in small batches via air transport, in person or via post, to limit death in transit. The advent of social media and YouTube and other video sharing sites has

resulted in an abundance of “how to” videos to catch species, encouraging people living in the range area to collect reptiles opportunistically for secondary income. Middlemen and sellers then work through private Facebook groups and other social media platforms to reach customers, with limited risk of being caught and easy opportunities to switch between platforms to dodge targeted law enforcement efforts. Large reptile shows and outdoor markets act as rallying points for collectors and dealers to build relationships and execute pre-arranged purchases.

## Big cats

All parts of the tiger are traded and used, for traditional medicine and for other purposes, but the bones are generally most sought after. Consumer demand has shifted in recent years with tiger product buyers purchasing these goods as a sign of wealth rather than for their health. The most popular bone-based products appear to be tiger wine and tiger glue/paste. A large part of the trade has shifted to online sales through social media and messaging apps.

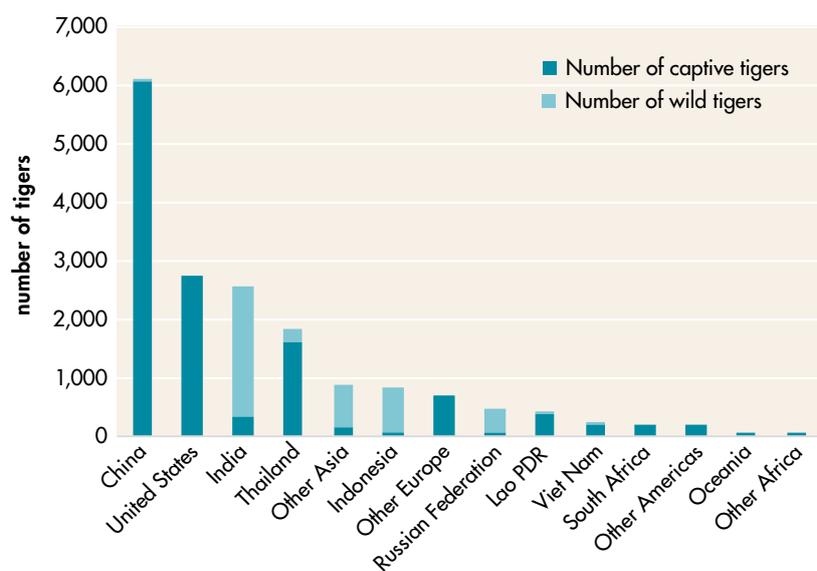
While the number of seizures of tigers and their parts remains small, that number has risen from 2007 to 2018. Thailand and India are the main source countries for these seizures, although sourcing from Nepal, Bangladesh, and Bhutan is also ongoing. Given the large captive tiger population in Thailand, which has

less than 200 wild specimens, most of these seizures likely involved farmed animals. In contrast, seizures from India, with the world's largest wild population, are likely from wild animals. Trafficking networks for tiger products involve Chinese, Vietnamese, Indian, and Indonesian traders who primarily sell the products to

medicinal industries in China and manufacturers or consumers in Viet Nam and Thailand.

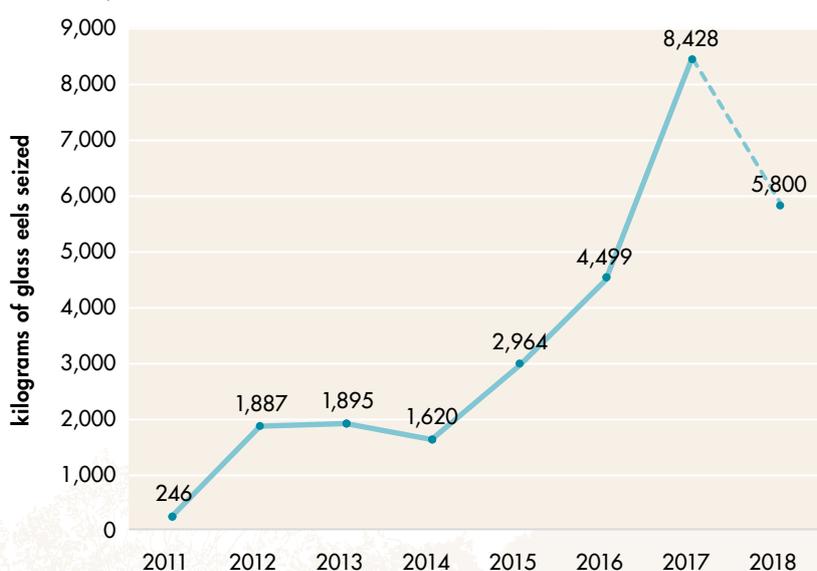
In addition to tiger products, products based on other big cat species have been seen in the illicit market, raising concern for those species. These include clouded leopard, snow leopard, jaguar, and lion parts, some passed off as tiger products. African lions appear to be the species of greatest concern, though, with current interest in the bone trade spurring a rise in the South African lion and tiger breeding industry.

**Fig. 9** Estimated number of tigers (wild and captive) by selected country, 2016 or most recent data



Source: CITES

**Fig. 10** Amount of glass eels seized (in kilogram), 2011-2018\*



Source: UNODC World WISE Database

\* The specimen types included in this analysis are live and fingerlings from the family Anguillidae. Data from 2018 are preliminary.

### European eel

Because eels have never been successfully bred in captivity, the production of eel meat is a multi-billion-dollar industry entirely reliant on wild-caught juveniles, known as “glass eels”. Demand for eel meat is especially strong in Asia. As with other wild species consumed in growing Asian economies, local populations of eels have been overtaxed by growing demand, leading to a global search for alternate species. Eel meat is also consumed in Europe, but declines in European stocks, teamed with growing international demand, led to the prohibition of export of eel from the European Union in 2010.

Since this time, the European authorities have detected organized criminal operations trafficking European glass eels to Asian farms. Because live glass eels must be kept in controlled conditions, these operations typically purchase European glass eels at source and rapidly transport them by air courier or air freight to commercial growing ponds. Successful interdiction is likely to lead to the exploitation of eel populations in parts of the world where there is less capacity to respond effectively.



### Box 3: The role of bribes in the illicit wildlife trade

A common theme in the illicit trade of ivory and rhino horn (and more generally with all illicit wildlife trade) is corruption in the form of bribes. Corruption has been found to be a critical enabler of the illicit wildlife trade, taking place at sourcing, transit and export stages, and involving public and private sector abuse of power and trust.<sup>a</sup> It can be ad hoc, involving smaller amounts of money and lower-level officials, or systemic, involving larger amounts of money, higher-level officers, and generally pre-planned.<sup>b</sup>

The case of the Shuidong connection<sup>c</sup>, documented by the Environmental Investigation Agency, showed that bribes can make up 4 – 10 per cent of the final (wholesale) sales value of ivory in Asia. The overall bribes paid in that single case amounted to US\$90,000–210,000. In 2012, along the Viet Nam–China border, there was an estimated US\$18,000 to US\$30,000 a day given out in bribes to border officials to allow ivory to cross borders illicitly.<sup>d</sup> Moreover, several member states reported to the Eastern and Southern Africa Anti-Money Laundering Group (ESAAMLG) cases of law enforcement officials involved in trafficking.

The Financial Intelligence Unit (FIU) of Namibia<sup>e</sup> documented a case in which 18 rhino horns weighing a total of 43 kilograms were found in the luggage of a passenger who arrived from Namibia in South Africa and was about to board a flight to Hong Kong, China. A Namibian police officer has been charged with

defeating or obstructing the course of justice for failing or omitting to detect and stop the 18 rhino horns.

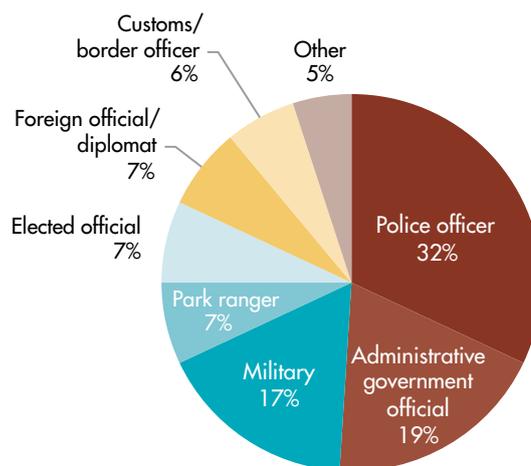
A court case documented that fraudulently acquired hunting permits were used to divert rhino horns to markets in the Lao People’s Democratic Republic and Thailand.<sup>f</sup> ESAAMLG noted that the authorities issuing such hunting permits could be subjected to corruptive practices.<sup>g</sup>

Corruption can thus occur at any level of the supply chain and involve many different actors. In 2018, the Organisation for Economic Co-operation and Development (OECD, see note a) collected open source data from four selected countries (Kenya, Uganda, United Republic of

Tanzania and Zambia) and identified the role of corrupt actors in reported cases, concluding that corruption may go far beyond lower-level police officers and park rangers. In the cases analysed, those involved in law enforcement operations (police, military, and customs) were the government officials most involved in corruptive practices. Officials responsible for administration were also involved but at a lower rate. Only a small portion of corrupted officials included park rangers (7 per cent).

An estimate of the overall volume of bribes paid is beyond the scope of this report and the data available does not permit it.

**Fig. 11** Government agency or role of actors found to be corrupt in available court cases



Source: OECD<sup>a</sup> (based on the identifiable agency from open source data collection)

a Organisation for Economic Co-operation and Development (OECD), ‘Strengthening Governance and Reducing Corruption Risks to Tackle Illegal Wildlife Trade: Lessons from East and Southern Africa’, *Illicit Trade*, 2018.

b Ibid.

c Environmental Investigation Agency (EIA), *The Shuidong Connection: Exposing the global hub of the illegal ivory trade*, 2017. See: SHUIDONG CONNECTION BOX.

d Bennett, E. ‘Legal ivory trade in a corrupt world and its impact in African elephant populations’. *Conservation Biology*, 29(1), 54–60, 2014.

e Republic of Namibia Financial Intelligence Centre, *Trends and typology report No 1 of 2017: Rhino and elephant poaching, illegal trade in related wildlife products and associated money laundering in Namibia*, 2017.

f UNODC, Sharing Electronic Resources and Laws on Crime (SHERLOC), Case Law Database, available at: sherloc.unodc.org. Case number ZAFx008.

g Eastern and Southern Africa Anti-Money Laundering Group (ESAAMLG), *A Special Typology Report on Poaching and illegal trade in wildlife and wildlife products and associated money laundering in the ESAAMLG region*, 2016.

## Illicit financial flows

The oft-heard refrain “follow the money” has been raised with regard to wildlife crime, but there has been little systematic assessment of how much money is associated with illegal wildlife markets and how this money is distributed.

Countering illicit financial flows has been recognised in the Sustainable Development Goals under target 16.4.: “[b]y 2030, significantly reduce illicit financial flows and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organised crime.” The estimates presented in this report provide an indication of the potential flows arising from the illegal trade in rhino horn and ivory and highlight the importance of systematic collection of price and supply data to

continuously monitor the situation and to provide insights on potential weaknesses that allow for disrupting illicit supply chains.

The annual illicit income generated from ivory and rhino horn trafficking between 2016 and 2018 was estimated at US\$400 (310 – 570) million for ivory and US\$230 (170 – 280) million for rhino horn trafficking. The largest shares of income are generated at the retail level, where rhino horn and ivory are processed and sold to end consumers. The emerging illicit financial flows (volume of cross-border transactions) could be – depending on how complex the supply chains are – almost twice as much, namely US\$ 570 million for ivory and US\$390 million for rhino horn. There is, however, a large range of possible scenarios.

## Endnotes

- 1 Further details on World WISE can be found in Chapter 1. Introduction.
- 2 Certain parties have submitted illegal trade reports to the CITES Secretariat but refused to let their data be used for research purposes by UNODC.
- 3 The annual data collection on AITRs was still on-going when data processing for the present report had to be finalised. Therefore, data for 2018 should be used cautiously as they are not directly comparable with those of previous years.

# POLICY IMPLICATIONS

Wildlife crime involving organized criminal groups is serious crime. No country is untouched by these crimes, which impacts biodiversity, human health, national security and socio-economic development, and lines the pockets of organized criminal groups. The illegal trade in wildlife, which by definition does not go through proper sanitary and phytosanitary controls, can potentially lead to the spread of zoonoses, such as SARS-CoV-2 that caused the COVID-19 pandemic. Addressing the biodiversity crisis and its cascading effects cannot be done without acknowledging the negative impact caused by transnational organized crime and corruption, across the entire wildlife trafficking chain. As each country may be a source, transit and/or destination country, each has a role to play in acting to prevent and address these crimes through disruption and deterrence. Wildlife crime, like other organized crimes, must be addressed through a balanced approach that targets the complementary pillars of supply, demand and livelihoods.

A significant portion of this report is based on seizure data collected from a wide range of countries. Poaching, trafficking and the illegal movement of large volumes of various protected species and their products across national, regional and international borders continues, to a large extent, unabated. In 2019 and in the first half of 2020, several major seizures of ivory, rhino horn, pangolin and rosewood have been recorded. There also appears to be geographic consolidation of trafficking routes across several markets, with Nigeria emerging as a key source/transit country for many of the shipments noted above. Similarly, Viet Nam has emerged as a key destination country for shipments of ivory and pangolin scales, although the domestic market for both commodities appears to be limited.

Also, the first clear and consistent linkages between two major illicit wildlife product markets – those for African elephant ivory and for African pangolin scales – have been documented, with a series of large-scale seizures containing both specimens in recent years.

Despite these large-scale seizures, the number of investigations that follow them remains disproportionately low. The news is not all bad, however: several African and Asian countries have secured a growing number of convictions for wildlife crime. For this trend to continue, more political commitment must be provided, and increased cooperation must occur to disrupt criminal organizations.

The previous World Wildlife Crime Report flagged the importance of countries undertaking an in-depth assessment through the ICCWC Wildlife and Forest Crime Analytic Toolkit<sup>1</sup> process to better understand their criminal justice and preventive responses to wildlife and forest crime. To date, 12 countries have completed the Toolkit process, while 10 more are underway; seven countries have conducted the Indicator Framework<sup>2</sup>. Both mechanisms allow for assessment of gaps in the national response to these crimes and identify areas that would benefit from capacity building and technical assistance. Common insights from these processes include the importance of having criminal legislation that recognizes serious wildlife crimes, and that capacity gaps in knowledge and resources, as well as a lack of mandate, can prevent enforcement from taking place. Inter-agency coordination and international cooperation are often cited as vital – but missing – keys to success.

Many tools to tackle serious and organized crimes already exist, including the international legal frameworks provided by UNTOC and UNCAC.

The outstanding question is why more countries are not using such tools to address wildlife crime? The answer likely lies in a combination of a lack of understanding of the nature of these crimes and their broader impact, insufficient prioritization and/or a lack of capacity or resources. Since countries are at different stages of tackling the challenges of wildlife crime and have differing capacities to do so, the following chapter offers suggestions for consideration by Member States and the international community towards preventing and addressing wildlife crime, which can support their work towards achieving the Sustainable Development Agenda.

## Wildlife crime is serious, organized crime

The objective of organized crime is to generate profit; organized criminal groups involve three or more people working together for a period of time, with the aim of committing one or more serious crimes in order to generate financial or material benefits, often by providing illicit goods and services. Transnational organized criminal groups operate across borders; their illegal behaviours include laundering the proceeds of their crimes, corrupting officials or engaging in corrupt acts, and actively working to obstruct justice. Such groups make use of sophisticated, complex transportation and finance networks. This report underlines that most of these features are present in the most serious forms of wildlife crime. The size and scale of the illegal shipments documented in this report require complex logistics and strong networks, suggesting the organized nature of these crimes and the involvement of a multitude of individual stakeholders in the trafficking.

Pursuant to UNTOC, ‘serious crime’ refers to an offence punishable by a maximum penalty of at least four

years of imprisonment. By increasing the maximum penalties for the most serious types of wildlife offences, some countries have started to frame these offences as serious crimes in their national legislation; as such, these crimes fall under the scope of UNTOC, and therefore Parties can benefit from the various tools for international cooperation contained in the Convention. Critically, countries should ensure that domestic legislation and procedures allow the use of alternate offences to pursue wildlife crime, such as money-laundering, corruption, fraud and enable wildlife crime to be considered a predicate offence for such crimes, to allow the use of the various tools to address these.

In addition to making illicit trafficking in protected species of wild fauna and flora involving organized criminal groups a serious crime in national legislation, illegal trade could be more easily targeted if each country were to consider prohibiting, under national law, the entry, exit or in some cases, possession, of wildlife products that were illegally obtained in, or illegally traded from, anywhere else in the world.<sup>3</sup> Addressing vulnerabilities in legislation – both domestic and international – can help reduce opportunities for trafficking.

Further, consistency and harmonization of legislation within countries and across regions is critical to close loopholes and prevent displacement of crime to areas with lower penalties. This could also improve cross-border investigations and judicial cooperation.

### Political will can be harnessed to generate action

Galvanizing political will around the issue of the seriousness of wildlife crime has led to a series of high-level international political events, like the London Conference of October 2018 and the first regional conference of the Americas on the illegal wildlife trade in October 2019. Commitments

have been made by Member States to address wildlife crime and associated economic crime and corruption, as well as to engage key stakeholders and enhance international cooperation. The Sustainable Development Agenda includes a variety of targets associated with reducing wildlife trafficking, notably 15.7<sup>4</sup>, further, the international community has resolved in a series of UN General Assembly resolutions on tackling illicit wildlife trade, in addition to those of the Commission on Crime Prevention and Criminal Justice, CITES and UNCAC, to work to end this scourge. Combined with several national and regional strategies for addressing wildlife crime, these statements and commitments lay the political foundation to end wildlife crime. Such commitments raise expectations for action, and also provide the necessary mandates for the international community to provide technical and financial support to address wildlife crime and its associated crimes.

### Addressing corruption is foundational to preventing wildlife crime

This report indicates that corruption exists across all stages of the wildlife supply chain and can facilitate the illegal trade of wildlife. This corruption manifests itself in various ways, ranging from officials receiving bribes and colluding with criminals, to abuse of office and embezzlement of resources allocated to wildlife management and protection. Bribes paid to officials can make up a significant part of the overall costs of wildlife trafficking; for example, as noted in Chapter 8 on illicit financial flows, customs officers may receive 4-10 per cent of the final wholesale value of ivory.

Criminals engage in corruption to create the veneer of legitimacy; as a result, illegal enterprises can be presented as legitimate sources of wildlife. Corruption inhibits the ability of honest public officials to fulfil their

mandates, whether those be managing and protecting wildlife resources, protecting borders, or managing and regulating markets for wildlife products. Corruption also interrupts the path towards criminal justice, as the absence of controls may result in evidence being lost or concealed, as well as leaving witnesses, prosecutors and other judicial officers vulnerable to corruption. Delays in expedient trial processes may increase opportunities for wrongdoing.

The international community has recognized the importance of the issue. In 2016, at the 17<sup>th</sup> meeting of the Conference of the Parties to CITES, a resolution<sup>5</sup> was passed calling on Parties to take a broad range of measures to prevent and combat corruption linked to the illegal wildlife trade. In 2019, the 8th Conference of the States Parties to the UN Convention against Corruption adopted a resolution,<sup>6</sup> the first of its kind, on preventing and addressing corruption linked to crimes that have an impact on the environment. The resolutions recognize that corruption underpins the illegal trade in natural resources, constitutes a growing source of profits for various criminal actors, and that addressing this connection is vital to target action to reduce illegal harvesting and trade and raise awareness of the detrimental effects of corruption.

These resolutions help create the policy environment in which to deepen and strengthen the much-needed practical work to combat and prevent corruption linked to wildlife management. Corruption prevention and risk mitigation work has commenced with wildlife, forest and fisheries management authorities across Africa, South-East Asia and Latin America. These efforts need to be strengthened and prioritized by many more countries. To improve results, it is necessary to support leaders to put more transparent and accountable processes and systems in place, including oversight and auditing services and tools in government

decision making, conducting anti-corruption risk assessments<sup>7</sup> and strengthening integrity policies and frameworks across the entire crime prevention and criminal justice chain.

Many more instances of wildlife crime and trafficking warrant being investigated and prosecuted as crimes of corruption, and the number of associated financial investigations needs to be further increased. Such an approach not only provides investigators with a wider range of powers and techniques than may be available under wildlife legislation, but may well also offer a more extensive range and severity of penalties. Investigating and prosecuting corruption and other economic crimes will help target more senior members of criminal groups and actual beneficiaries of wildlife crime, and disrupt organized criminal groups.

## Enforcement must go beyond seizures

As noted above, recognition of wildlife crime as ‘serious crime’ in relevant legislation is an important first step, but this must be reflected and reinforced throughout national criminal justice systems. Legislation can only have the desired impact if it is effectively implemented, however; in many States, such implementation is still lacking, and combating wildlife and forest crime has not been set as a priority for enforcement by policy and decision-makers. Criminals will continue to exploit legislative and enforcement loopholes, and where weaknesses exist, the illegal trade will be displaced to States less capable of addressing them. Many law enforcement agencies in source, transit and destination States require additional technical and financial assistance to address capacity gaps, including help to better prevent, detect and investigate wildlife trafficking, and better training and protocols on how to secure and deal with specimens once seized or confiscated. The support and engagement of specialized bodies and

investigative units, such as Financial Intelligence Units, customs, anti-corruption units, crime intelligence units, forensic investigators, crime analysts and others, seems to be the exception rather than the rule.<sup>8</sup>

Good risk management practices that enable profiling and targeting to detect and identify suspicious shipments and persons are crucial to effectively addressing crime, including wildlife crime. As noted above, however, detecting illegal wildlife shipments and the associated seizures should, to the fullest extent possible, be used as the starting point for further investigations. More must be done to go beyond seizures, to trace the ultimate beneficiaries of the trafficking through robust investigations, including parallel financial investigations, that lead to viable court cases. Capacity building from ‘crime scene to court’ is critical to this end.

--- Targeted enforcement approaches may be required for different species. As detailed in Chapter 8 on illicit financial flows, there are distinct differences in supply chains for different products; for example, rhino horn poachers are more organized than ivory poachers. The differing degree of professionalization of these groups – when indeed, they are different groups – suggests that a more specialized law enforcement response is required against rhino poachers, while elephant poaching may be effectively targeted through, amongst others, community-based interventions.

--- Specialized investigative techniques, such as controlled deliveries, can be used to disrupt and dismantle criminal organizations. Allowing a shipment to proceed to its final destination allows law enforcement authorities to identify and address role players across the entire trade chain, while also facilitating a better understanding of the

methods being used by criminal networks. Controlled deliveries should increasingly, and whenever possible, be considered as part of wildlife crime investigations.

--- Officials involved in building cases often have limited training on data management, intelligence analysis or other advanced investigation methods and techniques, which would greatly enhance strategic and tactical decision-making. Improving information analysis capacities can provide authorities with important data for cross-referencing information, identification of resource needs, and exchange of best practices at the national and international levels.

--- Science must be leveraged. To this end, the use of forensic science is critical, not only to identify or verify species but to deliver admissible evidence that supports law enforcement investigations and prosecutions. Enhancing national laboratory capacity to operate to internationally accepted standards is an important goal. In the meantime, countries should consider drawing upon the services of suitable international forensic providers who are accredited and certified to carry out wildlife forensic analyses, mindful of issues of admissibility of evidence in certain jurisdictions. Portable labs could also be considered, as these could speed up turnaround time and provide short-term national solutions for some countries.

--- Wildlife crime scenes can be located anywhere from remote areas to urban centres and border posts. Responding to such incidents can be complex and first responders must be properly trained, as mistakes made at the beginning of an investigation can jeopardize evidence and prevent perpetrators from being brought

to justice. Robust chain-of-evidence/custody protocols for samples that are collected to be sent to forensic labs are vital to ensure that the results of analyses will be admissible in court.

- Wildlife is illegally traded in very complex supply chains, which can result in significant illicit financial flows. Understanding the business practices of criminal operations, and how licit businesses are exploited by criminal groups, is essential in combating the crimes committed by organized criminal groups. Conducting parallel financial investigations can identify the ultimate beneficiaries of wildlife trafficking and disrupt illegal income streams. The money should be followed in every direction, not just towards profits and assets. Organized criminal groups spend money to commit crimes (for example, by paying for harvesting equipment (chainsaws, firearms, ammunition)), for transportation (for example, plane tickets for couriers), to establish front companies, etc., and these flows should also be used as indicators to detect potential illicit transactions and opportunities for disruption. To this end, basic information gleaned during law enforcement processes, such as details of the business structures and the financial transactions criminal groups enter into, must be collected. They should also be researched further and built into typologies to classify and outline criminal operations and techniques. Such typologies should be frequently updated, to allow all relevant agencies with the potential to intervene in the money flow chain to understand the potential vulnerabilities and what to look for.
- Even when follow-up investigations to seizures may not take place, it is important that

relevant agencies, at national, regional and international levels, receive and record the key facts related to all seizures, as these have significant value for risk assessment and profiling purposes, as well as for intelligence analysis. Such dissemination of information/intelligence may also provide insights to other forms of crime and links to other organized criminal groups. For example, the World Customs Organization's Customs Enforcement Network database is a source of intelligence for risk assessments. Several networks, both formal and informal, already exist to share information, such as INTERPOL's I 24/7, WCO's Environet, Wildlife Enforcement Networks (WENs) and various "Trade in Wildlife Information eXchange (TWIX)" networks like EU-TWIX, SADC-TWIX and Africa-TWIX, but they are often underutilized.

- Law enforcement would also benefit from strong partnerships with private sector service providers whose infrastructure and processes are used to facilitate illegal trade, such as the transport and financial sectors, to help identify patterns, trends, and possible red flags that could facilitate coordinated action, combining forces to combat trafficking. Other public-private partnerships that can be beneficial include those that supply software solutions, such as to strengthen intelligence gathering to inform decision-making or to provide various forensic services. All these mechanisms can build capacity, as such partnerships can put tools and information into the hands of those who can make a difference.

### Prosecutorial support and engagement are critical

Prosecutors are the gatekeepers of the criminal justice system, and for

complex cases they should be involved in the process as early as possible. If investigations lead to prosecutions and cases going to court, prosecutors need to charge all possible infractions linked to the case. For this to happen, it is necessary that the investigating officials correctly identify points to prove at the outset of an investigation and collect the necessary evidence to build a strong case. At the same time, prosecutors need to be aware of the multi-faceted nature of wildlife crime, which can touch upon many different pieces of legislation. Although there is growing awareness of the importance of having a strong legal framework under which to lay charges, there are still deficiencies in applying all relevant provisions of the law and understanding the importance of selecting the right charge to use. For this, prosecutorial services should be provided a continuum of capacity building focusing on the codification of the decision to charge, the practice of written and continuous review, and the use of ancillary legislation. This would have an added benefit of mitigating corruption risk by making the decisions taken during a prosecution transparent and accountable.

Many cases end in dismissal or acquittal because the initial charging decision was made without enough evidence present to successfully prove the charge and, in the absence of continuous review by the prosecutor, difficulties such as witness attendance or questions over admissibility of evidence are not identified in time. Support to the prosecution services to navigate existing law, such as using tailored reference guides for charges to levy and points to prove that reflect the broad range of criminal statutes and customs laws relevant to wildlife crime, would be beneficial. Support should also be provided to prosecution services to identify areas that would benefit from legislative change, such as the power to appeal lenient sentences.

Equally important is the need for prosecutors to have effective case management systems, preferably electronic. This allows for early engagement with investigators and enables prosecution-guided investigations with enough time for prosecutors to review cases before and after the charge. Prosecutors require access to all documents relevant to the case in order to facilitate efficient court proceedings. The number of cases that are dismissed as a result of basic case management deficiencies are unacceptably high. This not only demotivates the prosecutor and frustrates the judiciary, it also undermines the prosecutor/investigator relationship and damages public confidence in the criminal justice system.

In addition to the benefit of electronic case management systems, prosecutors and judges often do not have access to a centralized database of previous wildlife crime cases to help guide their decisions, which can result in lenient or inconsistent sentencing. A further benefit of technology can be harnessed to facilitate expert testimony, notably in cases where expertise may be limited. Using technology as such would render the court process more efficient and effective, notably when there is a need to explain complexities and the impact of these crimes.

### Inter-agency coordination on wildlife crime is necessary at the national level

There is often a lack of clarity concerning the roles, obligations and mandates of national agencies as to where wildlife crime “fits” in the national context. Increasingly, wildlife crime impacts on a variety of sectors and increasingly, cases of convergence with the trafficking of other commodities are coming to light. As such, national agencies should cooperate, work collectively and share information, but full integration

and cooperation at all levels is not the norm in many countries. There continue to be structural and political challenges in many countries to establishing inter-agency platforms to apply a whole-of-government approach. The need to clarify the roles and responsibilities of the various agencies mandated with wildlife law enforcement continues to exist in many countries; such clarification would improve not only efficiency but would better position entities to allow for improved inter-agency coordination. There is an urgent need for a trans-disciplinary approach that ties together law enforcement, wildlife management authorities and other relevant authorities such as Financial Intelligence Units, public health and safety agencies, administrative and local authorities. Countries could benefit from transnational organized crime units or other agency coordination/technical working mechanisms, including inter-agency platforms that promote an integrated and multidisciplinary response between decision makers and technical officials at the federal and local levels.

### International cooperation on criminal matters related to illegal wildlife trade can then support national efforts

There is often a long chain of criminality between the site where an animal or plant was illegally killed or obtained, and its final destination. As detailed throughout this report, wildlife crime stretches over national borders and across continents. While decades of negotiations under CITES have contributed to reduce the grey areas between legal and illegal trade of wildlife, cooperation to tackle the blackest end of the spectrum is still, however, in its infancy, as highlighted by the rarity of prosecutions and convictions that follow a seizure.

As noted above, as more and more countries move towards punishing the illegal trade of wildlife with maximum

penalties of at least four years imprisonment, this type of serious crime falls under the scope of UNTOC and enables Member States to deploy the tools available in it against wildlife crime. Parties should look more regularly at UNTOC as the legal basis for international cooperation, including for mutual legal assistance (MLA), extradition, joint investigations and use of specialized investigative techniques such as controlled deliveries and undercover operations for the most serious forms of wildlife crime.

UNTOC is a strong foundation for MLA, which is a principle mechanism used for international cooperation towards investigating and prosecuting serious crime types. Despite its importance to successful investigations and prosecutions, MLA is seldom used in the wildlife crime arena, and the international community needs to better understand the challenges in using MLA and increase its efforts to build capacity to promote this tool. Outside UNTOC, States could also look to use, if preferable, bilateral or regional mechanisms/agreements to exchange information and facilitate international cooperation on criminal matters, including through networks and information-sharing platforms such as those noted previously.

Partnerships and other initiatives and networks play an important role in supporting the law enforcement community and in strengthening efforts to address transnational crimes such as wildlife crime. For example, the International Consortium on Combating Wildlife Crime (ICCCWC) is a collaborative effort between the CITES Secretariat, INTERPOL, UNODC, the World Bank and World Customs Organization (WCO). Coordinated capacity building and support at national, regional and international level and strengthened criminal justice systems help to ensure that perpetrators of serious wildlife crimes face a formidable law enforcement response.

Various networks to support different elements of the criminal justice response also exist and can be the basis for cooperation and joint investigations, such as WENs, anti-money laundering and anti-corruption networks and working groups, and forensics networks like the African Wildlife Forensics Network and species identification databases, like RhODIS<sup>9</sup>. Such regional and inter-regional mechanisms are platforms for cooperation and aim to combine forces to disrupt and dismantle transnational organized criminal groups and work to bring them to justice.

### Research, data and monitoring require ongoing funding and improvements

Data and evidence on criminal groups, prices, modus operandi and the criminal justice response, and commensurate analysis, are the foundation of evidence-based policy making and programme development. Continuing to conduct and provide financial support for international research and analysis on wildlife crime, especially global analyses like the World Wildlife Crime Report, is therefore vital to reducing illegal wildlife trafficking.

The lack of the aforementioned data severely hampers understanding of market dynamics and renders the interpretation of trends in seizure data quite difficult. There are significant gaps in research and data on wildlife crime in many countries; for example, the dearth of wildlife crime data in Latin America leaves a vacuum in understanding the situation of wildlife trafficking to and from the region. While officials in that region have taken steps to protect endangered species like the jaguar, through their commitments to address the trafficking, they need solid research, based on empirical data, to guide these well-intentioned and commendable steps.

Of particular importance to improve data and fill in the gaps is improved

submission and quality of Annual Illegal Trade Reports (AITRs) by CITES Parties to the CITES Secretariat. The requirement for AITRs to be submitted was agreed at the 17<sup>th</sup> meeting of the Conference of the Parties to CITES in 2016, and the first reports were due in 2017. While this is a new requirement, submission rates are still relatively low and there remains significant room for improvement in the submission of AITRs. Only 78 countries submitted AITRs at least once between 2017 and June 2020<sup>10</sup> and, while these countries represent some of the main source and destination countries for illegal wildlife trade, it is important to obtain data from all Parties to identify emerging trends, species or regions of concern. Building the capacity of countries to identify the species of seized specimens and creating the infrastructure to report the seizures in a standardized format is vital for monitoring and research on the illegal trade.

While there is a gap in country-related data, the data historically collected often focused on charismatic species like elephants, while other trafficked species such as birds, reptiles, spiders and aquatic species have tended to go under-documented, thus hampering proper enforcement efforts. Without an even representation of the scope of the data – geographic and species – there is a risk of targeting enforcement efforts in the wrong place or towards the wrong species. Further, there is a need for additional analysis on the use of alternative species in some markets, such as leopard, jaguar and lion as substitutes for the tiger bone trade, or whether helmeted hornbill ivory is a replacement product for elephant ivory. A strong set of data to make such insights is critical, as there may be different responses required depending on the market trend. Another data element that is required to consistently measure the illegal trade is systematic reporting on price data for a variety of illegal wildlife products, notably for less well-researched species. Some of these

data needs could be met through partnerships and information exchanges with other conservation and law enforcement stakeholders, some of which manage other wildlife crime databases, as well as through web scraping methodologies to supplement existing official data sources with open source data.

Currently, the AITRs request some basic criminal justice data from enforcement agencies, but these data could be expanded to include the collection of more detailed data that would allow tracking cases through the criminal justice system to provide a basis from which to measure successes in tackling the illegal trade. Such data could also point to good practices that could be applied or expanded upon in other contexts.

It is worth noting that the AITR does not collect data on gender-related matters: very little is known about the specific roles of women and men in wildlife crime, and more research efforts should be placed on understanding the gender dynamics of the illegal wildlife trade. If enforcement agents are making assumptions about gendered aspects of wildlife crime, they could be missing opportunities for seizures and arrests, and the policy and programming communities could be missing opportunities to design tailored interventions that would foster sustainable success.

Lastly, while global research on wildlife crime has mainly focused on internationally protected species, little comparative analysis is available on wildlife crime affecting nationally protected species, including illegal domestic trade. With criminals taking advantage of any loophole, there is a need to better understand the trafficking of non-CITES listed species within and across borders to support law enforcement and criminal justice practitioners to define national and international tools that can protect the biodiversity of each country from criminal threats.

## Addressing wildlife crime as it moves to the Internet

Like many markets, trade in wildlife and wildlife products is moving online. Organized criminal groups are increasingly using a range of online platforms and technologies to facilitate the transnational trafficking of wildlife products. Member States should develop the capacity of law enforcement agencies to investigate online sales of illegal wildlife, infiltrate existing online markets, collect relevant evidence including using digital forensics, and develop enforcement countermeasures. Monitoring of online trade, and using available technology to track key hubs, patterns and players involved in the illegal trade, is critical to disrupting the organizations exploiting online platforms. These efforts must be flexible to enable law enforcement to react quickly when, for example, reptile traders switch to other online platforms after one platform cracks down on illegal trade.

As both legal and illegal trade increasingly use virtual means, partnerships between law enforcement and technology platform partners like Facebook, WhatsApp, Alibaba and WeChat, amongst others, will be an important mechanism to prevent and disrupt illegal trade. These platforms should support efforts to regularly monitor specialist social media groups and other online sales channels for illegally-traded wildlife.

## Improving local community engagement and sustainable livelihoods

Communities that live close to wildlife are key partners in tackling wildlife and forest crime. They can play an essential role in preventing crime at source and form the so-called 'first line of defense.' Community-led patrols and community-based crime prevention initiatives can be vital extensions of national law enforcement networks. As a matter of policy,

countries and their enforcement agencies must ensure that their strategies, tactics and activities do not alienate such communities, but that these communities are included as partners who can support and protect the habitat they share with wildlife.

Beyond enforcement, investing in and engaging local communities as partners has been effective in several areas. Success has been achieved as a result of tailored frameworks to fit the nature of the challenges and opportunities, and due to fostering active participation of the local community members to become guardians of wildlife. Successful initiatives have commonalities like shared management rights and fair and equitable benefit-sharing, such as in conservancies that are managed directly by local communities. Crucial is the empowerment of those in the community, with support to build skills, provide resources and incentives to engage in stewardship or disincentives for illegal behaviour.

Communities living in close proximity to wildlife have been exploited by organized criminal groups, often as a result of a lack of legitimate income earning opportunities. Building resilient and sustainable communities is key to incorporating them into national efforts to end wildlife crime. This requires both establishing trust and confidence and ensuring that communities benefit from the natural resources. An inequitable distribution of gains tends to generate marginalization and a lack of trust, and a low valuation of wildlife by communities. Governments should ensure that private sector entities, which often manage and operate tourism and related industries, share the benefits and income derived from such operations and respect the rights and voices of community partners.

Providing licit income generating opportunities for communities living in, or adjacent to, areas of wildlife is critical. Governments and

the international community must look to foster small business enterprises and to promote various forms of sustainable livelihoods. National agricultural and rural development strategies must include communities vulnerable to the temptation to poach and take wildlife in an illegal and unsustainable manner. There are numerous best practices that can be taken from alternative development programmes aimed at reducing the illicit cultivation of drug crops.

Several forms of legal and sustainable wildlife use can be important sources of income for families who live close to global biodiversity hotspots. Sustainable livelihood initiatives must go beyond eco-tourism, which has proven to be vulnerable in the face of travel restrictions associated with the COVID-19 pandemic. Instead, future-proofing livelihoods that focus on resiliency and can withstand the myriad challenges posed by the impact of climate change, pandemics and criminal exploitation must be considered as part of any national strategy for tackling wildlife crime.

## Demand reduction is essential to preventing wildlife crime

As reflected throughout this report, illicit markets for wildlife are not that different from other illicit markets. If there are strong regulations in place, and high levels of demand, prices for the products go up. This, in turn, increases the profits lining the pockets of criminals offering these products illegally. If efforts to curb the trafficking do not impact the overall market – both supply and demand – there is often a replacement or 'balloon' effect, which displaces the trafficking to other products or locations. This phenomenon also exists in wildlife markets, both geographically and in terms of species. With strong regulations in one place and the existence of high levels of demand, illicit markets to supply that demand will move to less-regulated places and/or towards substitute species.

Recent changes in the ivory market show that efforts to impose strong regulations, such as bans, to control supply, while also tackling demand through demand reduction campaigns, can be effective. Looking at the various bans on ivory that have been implemented in recent years, these bans would not have had the impact they had on the decline in poaching for elephants had other, commensurate, demand reduction efforts not taken place. If demand for ivory had stayed high because demand reduction efforts had not been successful, the decline in poaching post-ban would probably not have occurred. Similar measures should be considered for any wildlife products where there is no legal international market.

Recognizing that demand could be an important driver of wildlife trafficking, addressing it is a core component of reducing wildlife and forest crime. There is no ‘one size fits all’ approach, and demand reduction initiatives should be evidence-based, species-specific and country/community-specific. Civil society plays an important role in demand reduction efforts, and many organizations have worked tirelessly to raise awareness of wildlife crime and conservation issues and to fundamentally change behavior in consumer markets. Demand reduction actions must be undertaken in parallel to law enforcement and supply efforts, as well as livelihoods initiatives, as success in preventing wildlife crime can only be achieved when all three areas are addressed in parallel. Lessons learned from research and previous campaigns have demonstrated the importance of demand reduction initiatives founded on culturally-sensitive, evidence-based insights – rather than assumptions – into motivations for consumption to provide targeted, effective interventions. Behavioral science has many lessons that can be drawn upon, and it is important to mainstream demand reduction messages in culturally appropriate communications targeting specific audiences and to reinforce these messages over time. A strategic

approach needs to be developed to target specific populations, notably youth.

### Addressing criminal exploitation of captive breeding facilities

Captive breeding is being exploited by both criminals and unscrupulous traders, and relevant countries need to do much more by way of enforcement or enactment of new laws to effectively regulate captive breeding facilities and ensure the legality of their operations. While some of these activities may be ‘legal’ in terms of national legislation or CITES, if they also support, prop up, permeate or otherwise aggravate wildlife crime and trafficking, this must be addressed.

All countries that allow the breeding of CITES Appendix I species in privately-owned facilities for commercial purposes bear the responsibility to ensure that such businesses operate in line with CITES provisions and implement high standards of animal welfare, public health safety and legality. This report indicates that some licensed breeding facilities have been used to illegally supply demand for exotic pets, luxury products and ingredients for traditional medicine. This is partly caused by conflicting and deficient legislation that reduces the effectiveness of the inspection/regulatory mechanisms. The delegation of licensing authority to sub-national administrative structures also increases the opacity of the processes and the risk of corruption. To address this, the following should be considered:

- Countries should adopt comprehensive provisions at national and/or federal level to ensure that laws and regulations on possession, breeding and trading are regularly updated, disseminated and consistently applied throughout the territory.

- There is a need for greater scrutiny of the risks and opportunities that are exploited by criminal enterprises and criminal networks to profit from these facilities.

- The process of issuing licenses for these types of facilities should be subject to multi-stakeholder approval involving different government departments, and anti-corruption protocols.

- Inspections of existing facilities should be conducted by teams focusing on a range of factors including risks for human health, sanitary compliance, environmental/ecosystem implications, integrity of the supply chain, integrity of the business model and animal welfare.

- Mechanisms should be developed to complement regulatory inspections with law enforcement investigations that allow for both civil and criminal justice oversight and stricter regulation.

- Additional focus should be put on traceability and proof of valid captive breeding documentation throughout the supply chain.

### Strengthening supply chain integrity

Organized criminal groups have demonstrated their ability to exploit weaknesses in complex supply chains. As noted in the first World Wildlife Crime Report, significant opportunities continue to exist for criminals to launder illegally sourced wildlife through the legal supply chain. Supply chain integrity could benefit from making some parts of the trade transaction process electronic, thereby reducing opportunities for corruption, which may also include exploring new technologies like blockchain. More needs to be done to ensure efficient controls are set in place to prevent illegal trade without disrupting the

legal trade. The CITES community has made strides towards strengthening the permits system, but the slow uptake by countries of an electronic permit system due to the high installation and maintenance costs means that gaps remain in which falsified documents and unscrupulous actors can undermine the trade chain, making poorer countries particularly vulnerable. CITES has supported its Parties that expressed interest in implementing the e-CITES permit system<sup>11</sup> and has worked to ensure national systems remain robust and interoperable. The integrity of the CITES permit system is inherent to preventing illegal trade, and as mentioned above, reducing corruption risk is critical.

DNA tests could also be used at various points in the supply chain to ensure that species are accurately declared. Regular audits can be conducted to monitor sources of supply, and there are clear benefits to reducing the gaps in collaboration between actors at all stages of the supply chain, including the private sector.

## Preventing displacement

This report has shown that offenders involved in wildlife crime, similar to those involved in other crimes, adapt their modus operandi to enforcement responses to avoid detection and to continue to operate. Offenders respond to increased enforcement in certain areas by shifting their operations to other geographic locations where enforcement is less stringent. For example, as noted at the opening of this chapter, since the last report, Nigeria has emerged as a key source/transit country for shipments of ivory, rosewood and pangolin scales, and Viet Nam has become a major destination country for ivory and pangolin. These patterns may be the result of increased enforcement in previous source/transit/destination hubs, and traffickers have sought weaker links to exploit. Similarly, pangolin traffickers take advantage of weak border

controls in northern Uganda, the Democratic Republic of the Congo and South Sudan to meet buyers and stockpile scales in countries where the rule of law is weaker.

A similar form of displacement occurs for the types of species trafficked. If enforcement efforts target a particular species as a high priority, poachers may adapt to traffic other species, notably those of similar value at destination markets, for which the risk of being caught is lower. Some of these shifts are also the result of changes in consumer preferences or reductions in consumption because of strong enforcement. Recent seizures of combined shipments of ivory and pangolin scales, as well as data gathered from poachers in Cameroon and Uganda, suggested that ivory traffickers are shifting to the pangolin scale trade in response to the decline in the ivory market.

Available information further suggests that authorities in some countries treat crimes involving some species, such as pangolins, as less serious than other forms of poaching, such as elephant poaching for ivory. This results in the lack of enforcement action when some species are involved, which can be a driver for those species to be specifically targeted by organized criminal groups. Given these displacement effects, law enforcement responses to wildlife crime should anticipate and mitigate shifts at both ends of the trafficking chain, for changes in both geographical and in species trends. Law enforcement efforts should also be as versatile as possible to allow for rapid changes in strategy as displacement occurs.

## Preventing and addressing risks to human health

The COVID-19 pandemic has highlighted that wildlife crime is a threat not only to the environment and biodiversity, but also to human health, economic development and security. Zoonotic diseases – those caused

by pathogens that spread from animals to humans – represent up to 75 per cent of all emerging infectious diseases. Trafficked wild species – pangolins, birds, turtles, tigers, bears and many more – and the resulting products offered for human consumption, by definition, escape any hygiene or sanitary control, and therefore pose even greater risks of infection. When wild animals are poached from their natural habitat, butchered and sold illegally, the potential for transmission of zoonotic diseases is increased. The One Health<sup>12</sup> approach needs to be at the centre of any informed policy involving the relationship between humans and wildlife species. Use, consumption and trade of wildlife species by humans need to be evaluated on the basis of scientific and fact-based information that puts safety and prosperity for the planet above the economic or commercial value of these species. Stopping the trafficking in wildlife species is a critical step not just to protect biodiversity and the rule of law in line with the Sustainable Development Goals, but to help prevent future public health emergencies.

## Endnotes

- 1 UNODC. (2012). Wildlife and forest crime analytic toolkit. (Available at: [https://www.unodc.org/documents/Wildlife/Toolkit\\_e.pdf](https://www.unodc.org/documents/Wildlife/Toolkit_e.pdf)).
- 2 ICCWC. (2016). ICCWC Indicator framework for combating wildlife and forest Crime. (Available at: [https://www.unodc.org/documents/Wildlife/Indicator\\_Framework\\_e.pdf](https://www.unodc.org/documents/Wildlife/Indicator_Framework_e.pdf)).
- 3 Examples of legislation can be found in the UNODC Guide on Drafting Legislation to Combat Wildlife Crime on page 26. (Available at: [https://www.unodc.org/documents/Wildlife/Legislative\\_Guide.pdf](https://www.unodc.org/documents/Wildlife/Legislative_Guide.pdf)).
- 4 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products.
- 5 Resolution Conf. 117.6 Prohibiting, preventing, detecting and countering corruption, which facilitates activities conducted in violation of the Convention. (Available at: [https://cites.org/sites/default/files/document/E-Res-17-06\\_0.pdf](https://cites.org/sites/default/files/document/E-Res-17-06_0.pdf)).
- 6 Draft resolution to be recommended by the Conference of the States Parties to the United Nations Convention against Corruption for adoption by the General Assembly. (Available at: [https://www.unodc.org/documents/treaties/UNCAC/COSP/session8/Advance\\_unedited\\_resolutions\\_final.pdf](https://www.unodc.org/documents/treaties/UNCAC/COSP/session8/Advance_unedited_resolutions_final.pdf)).
- 7 See, for example, UNODC. (2019). Scaling back corruption: A guide addressing corruption for wildlife management authorities. (Available at: [https://www.unodc.org/documents/corruption/Publications/2020/Scaling\\_back\\_corruption\\_FINAL.pdf](https://www.unodc.org/documents/corruption/Publications/2020/Scaling_back_corruption_FINAL.pdf)).
- 8 See, for example, OECD. (2019). The illegal wildlife trade in Southeast Asia. (Available at: <http://www.oecd.org/publications/the-illegal-wildlife-trade-in-southeast-asia-14fe3297-en.htm>).
- 9 University of Pretoria. (2020). Rhino DNA Index System (RhODIS). (Available at: <https://erhosis.org/>).
- 10 The reported number refers to CITES Parties that allowed the CITES Secretariat to transmit AITRs to UNODC for the purpose of updating the WorldWise Database and to conduct research on wildlife crime.
- 11 See the CITES webpage on eCITES for more information (Available at: <https://cites.org/eng/prog/eCITES>).
- 12 See the World Health Organization website for more information on the One Health approach. (Available at: <https://www.who.int/news-room/q-a-detail/one-health>).