



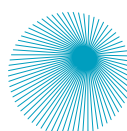
MONITORING ONLINE ILLEGAL WILDLIFE TRADE

WITH INSIGHTS INTO IVORY
AND PLANTS

JANUARY 2025



GI-TOC



GIFP
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Programme



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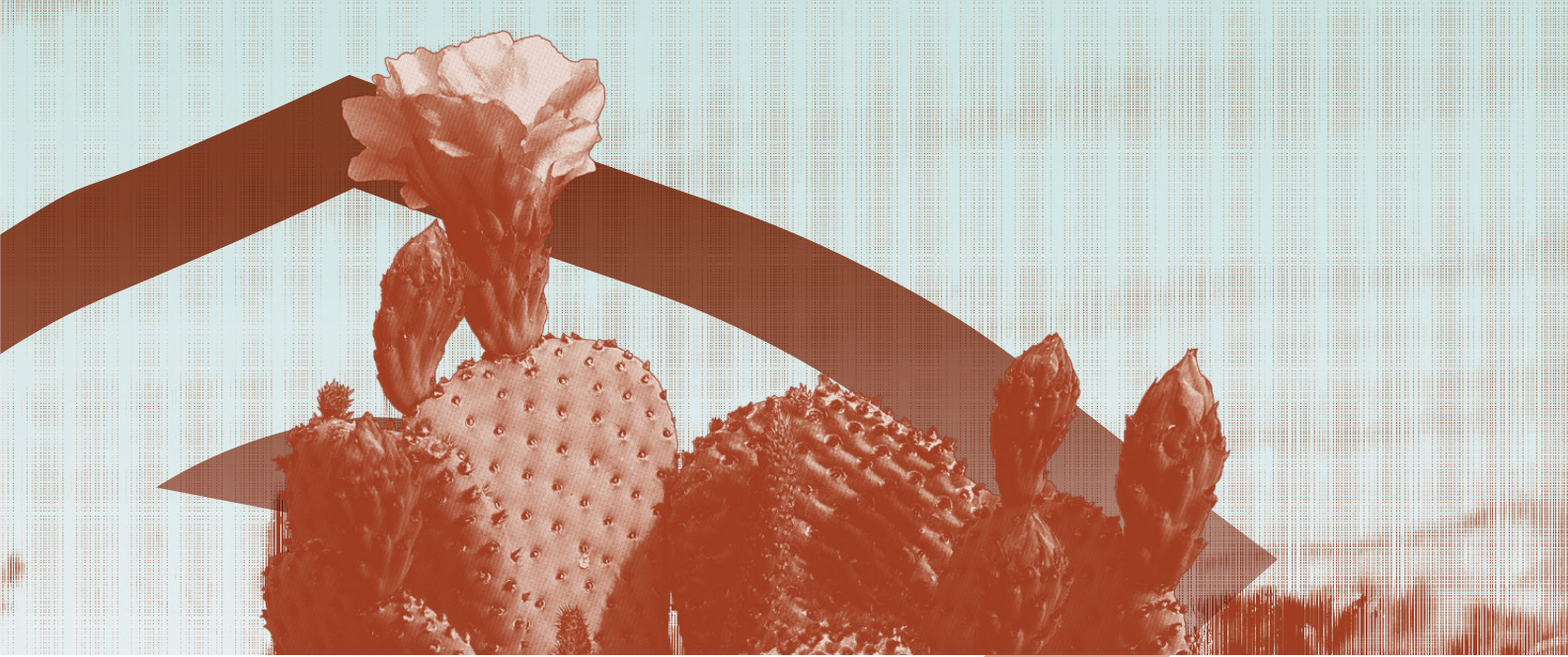
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ACRONYMS AND ABBREVIATIONS

CITES	Convention on the International Trade in Endangered Species of Wild Fauna and Flora
GMS	Global Monitoring System
IUCN Red List	International Union for Conservation of Nature Red List of Threatened Species
IWT	Illegal wildlife trade
SAMLIT	South African Anti-Money Laundering Integrated Task Force
UNODC	United Nations Office on Drugs and Crime
WARPA	Wild Animal Reservation and Protection Act, B.E. 2562 (2019)



THE GLOBAL MONITORING SYSTEM FOR ONLINE MARKETING OF ILLEGAL WILDLIFE TRADE

The last decade and a half has seen an alarming surge in illegal wildlife trade (IWT) on the internet. However, a dearth of data regarding the scale of the market, its dynamics, operations and ramifications, especially on a global scale, is a significant hindrance to combating this crime. To address this, ECO-SOLVE is developing a Global Monitoring System (GMS) to systematically monitor global online IWT and gather data to feed into law enforcement activity and to inform policymaking. The GMS is a network of data hubs in countries whose domestic online markets are considered the largest or most consequential in their regions. The GMS's national monitoring nodes are being set up in a staggered process and the size and scope of the network will grow with each edition of the Report. This Global Trend Report draws on data from three national data hubs: Brazil, South Africa and Thailand. By identifying areas of high pressure on endangered species and ecosystems, monitoring may enable targeted interventions and inform law enforcement action to prosecute those responsible for wildlife crimes. Additionally, monitoring can help detect emerging trends and shifts in the trade, allowing for timely and effective responses to new threats and challenges.

This is the third publication in a series of Global Trend Reports, that aim to showcase and contextualize trends in online IWT. Reports will be published throughout the three years of the ECO-SOLVE project, with about two to four reports released per year. Drawing on findings generated by the GMS, each Global Trend Report will highlight the latest trends in statistical data, including

DEFINING ONLINE ILLEGAL WILDLIFE TRADE

Online wildlife trafficking refers to the illegal trade in protected wildlife species and their derivatives facilitated through online platforms and digital means. It encompasses a wide range of activities, including the sale of live animals, exotic pets, animal parts and products derived from endangered species.¹



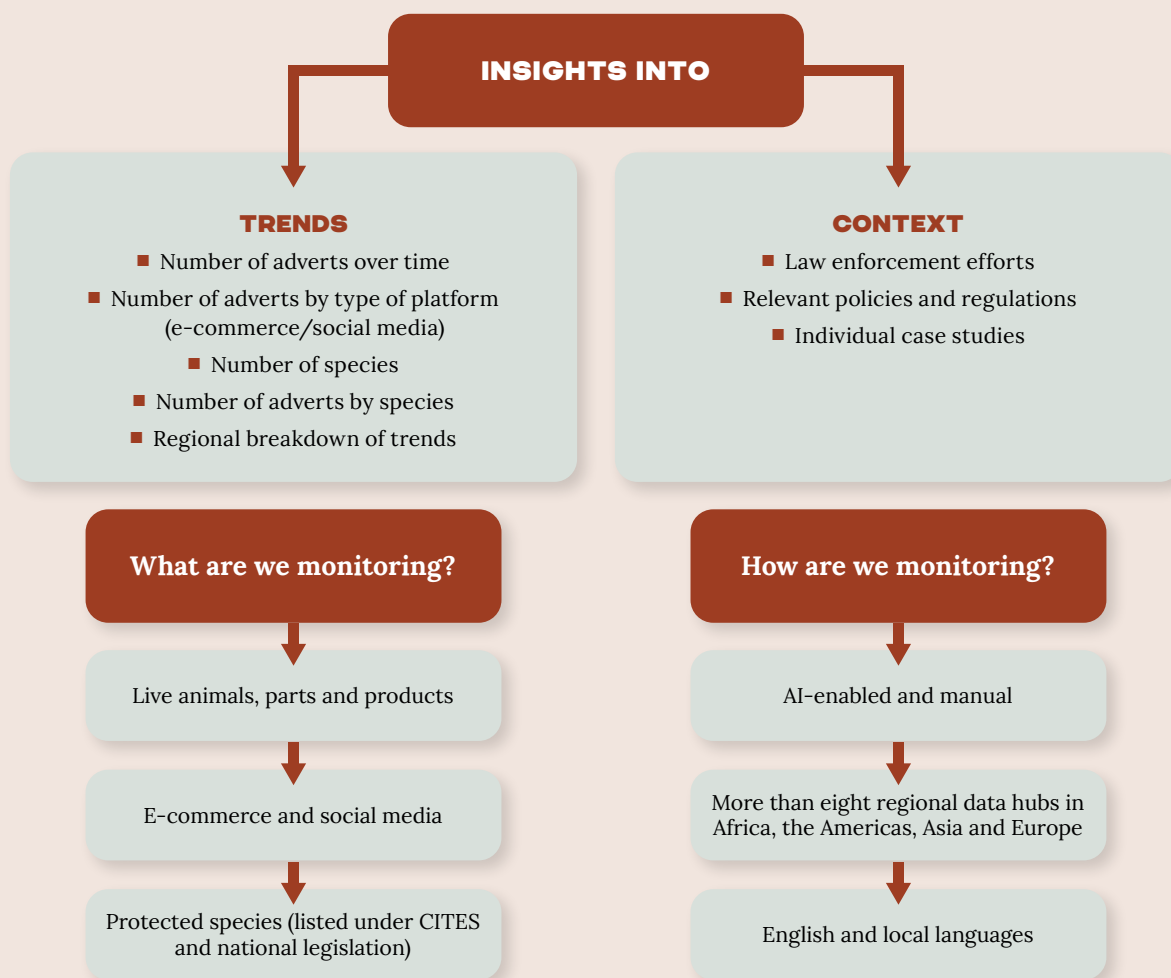


FIGURE 1 Global Trend Reports – expected insights and trends.

the number of advertisements found, the species advertised as well as the platforms that host these adverts. Diving deeper into individual topics, the reports will offer regional breakdowns and include sections that contextualize and analyze findings, while also investigating changes in regulations and their effects on online IWT as well as trends in law enforcement. The reports will also discuss case studies of online IWT.

Following the structure of the previous Global Trend Reports, the third issue begins with a trend analysis of online IWT drawing on data from regular monitoring carried out between August and October 2024 by GMS data hubs in Brazil, South Africa and Thailand. The report then takes a closer look at the elephant ivory trade in Thailand, exploring how social media is being used to facilitate illegal trade. The third section provides a global overview of the illicit trade in flora and explores the role of online platforms, highlighting the need for more effective online monitoring.

Methodology

The main data analysis presented here draws on data collected by the GMS related to online advertisements for the illegal sale of wildlife. ECO-SOLVE derived general figures, such as the number of advertisements per data hub over time; the platforms where they appear; the protection status of the species under international and national regulations; and the extent to which online markets are concentrated. ECO-SOLVE also developed analyses of interactions between these variables to enhance understanding of the nature of the online trade.

For the data to be comparable across space and over time, data hubs follow a structured manual monitoring routine. Monitoring is employed under standard temporal intervals for the same platform types. In addition, data hubs monitor species that are included on established global and national lists of vulnerable and endangered species. Akin to methodologies that monitor market trends (e.g. inflation) by analyzing a 'basket' of goods that collectively represent the wider economy, ECO-SOLVE creates national and global species baskets to represent the broader online IWT market. We take into account the species' protection status under CITES (the Convention on the International Trade in Endangered Species of Wild Fauna and Flora) and national regulations, their conservation status under the International Union for Conservation of Nature Red List of Threatened Species (IUCN Red List) and their legal status under criminal law, as well as their relevance to (local) law enforcement.





TRENDS IN ONLINE IWT MARKETS: GMS DATA AUGUST–OCTOBER 2024

The following analysis draws on GMS monitoring of the online IWT market over a three-month period (August–October 2024) in Brazil and South Africa. It also draws on monitoring in Thailand, where the GMS hub completed its first full month of structured monitoring in September 2024.

Across the three hubs, the GMS detected 1 741 advertisements of the 34 target species. This represents an increase of approximately 265% (1 264) from the 477 advertisements detected in the previous reporting period (May–July 2024, Brazil and South Africa data), as covered in the second Global Trend Report in October 2024.² This is largely due to the establishment of the data hub in Thailand and the high volume of detections recorded in the country during the two-month period (September–October). Thailand accounted for 77% (1 349) of the advertisements detected, with 12% (201) coming from the data hub in Brazil and 11% (192) from the data hub in South Africa. The Brazilian hub detected five species with an average of 40 detections per species, the South African hub detected 12 species with an average of 16 detections per species and the Thai hub detected 16 species with an average of 84 detections per species. Between August and October 2024, 74% of the target species were detected, compared with 61% in the previous monitoring period.

As shown in Figure 2, Facebook accounted for 91% (1 587) of the advertisements during this period, an increase from the previous reporting period, when 78% (374) of the detections were from Facebook. Data from the newly established hub in Thailand accounts for this increase, as it did not detect any advertisements on e-commerce platforms. Looking at data from Brazil and South Africa separately, there is a notable decrease in Facebook detections: from 78% (374) in May–July 2024 to 61% (238) in August–October 2024. The e-commerce platforms with the most detections remained OLX in Brazil (12) and PublicAds in South Africa (136). The South African hub detected more adverts on PublicAds (136) than Facebook (53) for this reporting period.

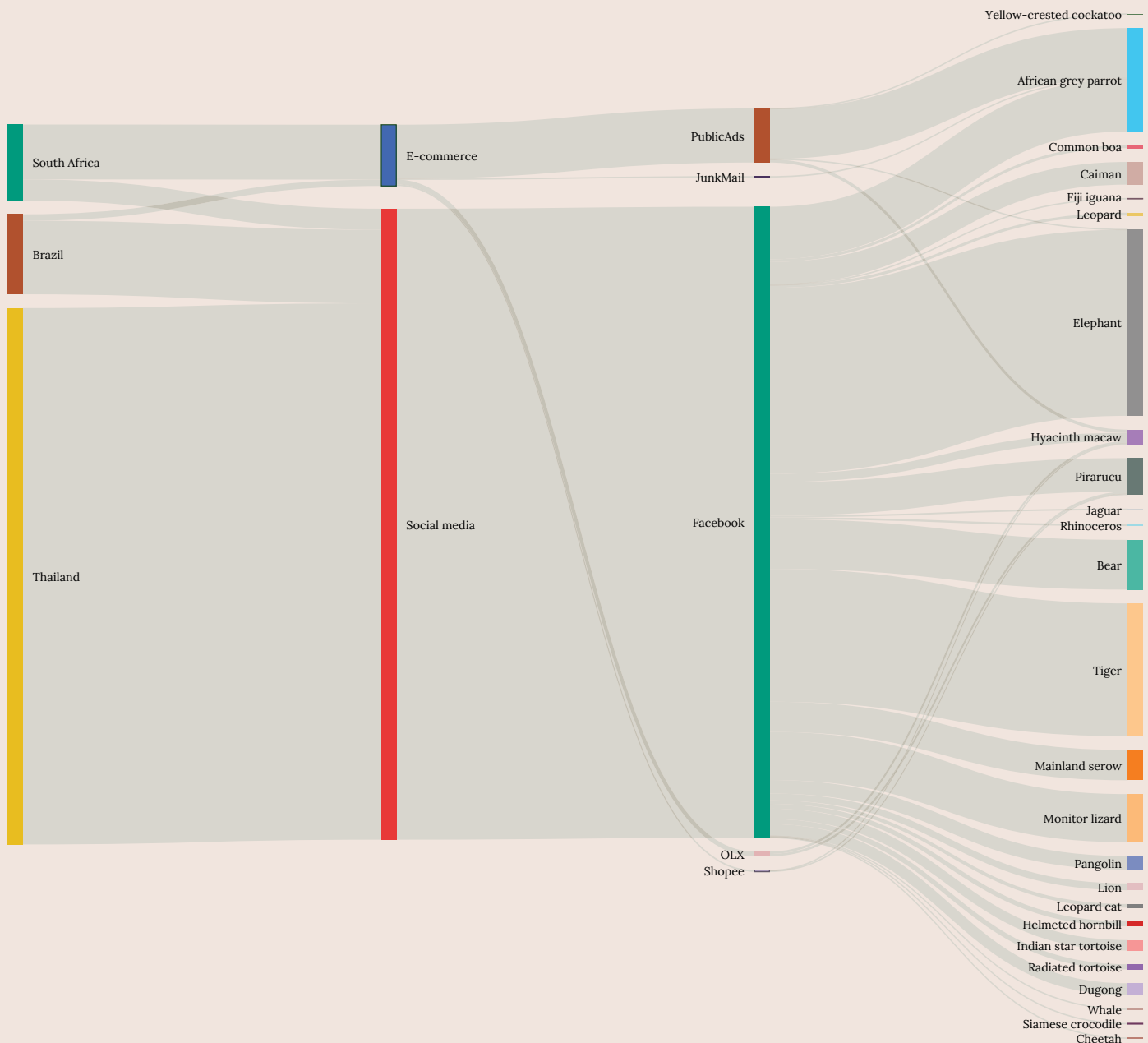


FIGURE 2 Online advertisements for IWT in target species detected by GSM data hubs in Brazil, South Africa and Thailand, August–October 2024, by platform type, platform and species.

NOTE: Each path links a country to a platform type and then to a specific platform and species, representing the distribution of detections. The width of each line corresponds to the number of advertisements detected. Data for Thailand includes only September and October.

Figure 3 details the most advertised species, based on the number of advertisements detected in this study. The stacked bars show both the total numbers and the number of detections per data hub. Elephants topped the list with 469 detections, reflecting active markets in Thailand and South Africa. Tigers were in second place with 334 detections, 99% of which were in Thailand. African grey parrots were a highly recorded species, with 260 detections across the three countries. The hyacinth macaw was the only other species detected by all hubs, albeit with fewer detections overall (37) and with 77% of detections from Brazil. In Thailand and South Africa, hyacinth macaws are typically advertised as live specimens; in Brazil, the bulk of the trade reflects the use of feathers in illegally marketed indigenous headdresses (known locally as *cocares*). Pangolins were in 10th place, with 34 detections from Thailand.

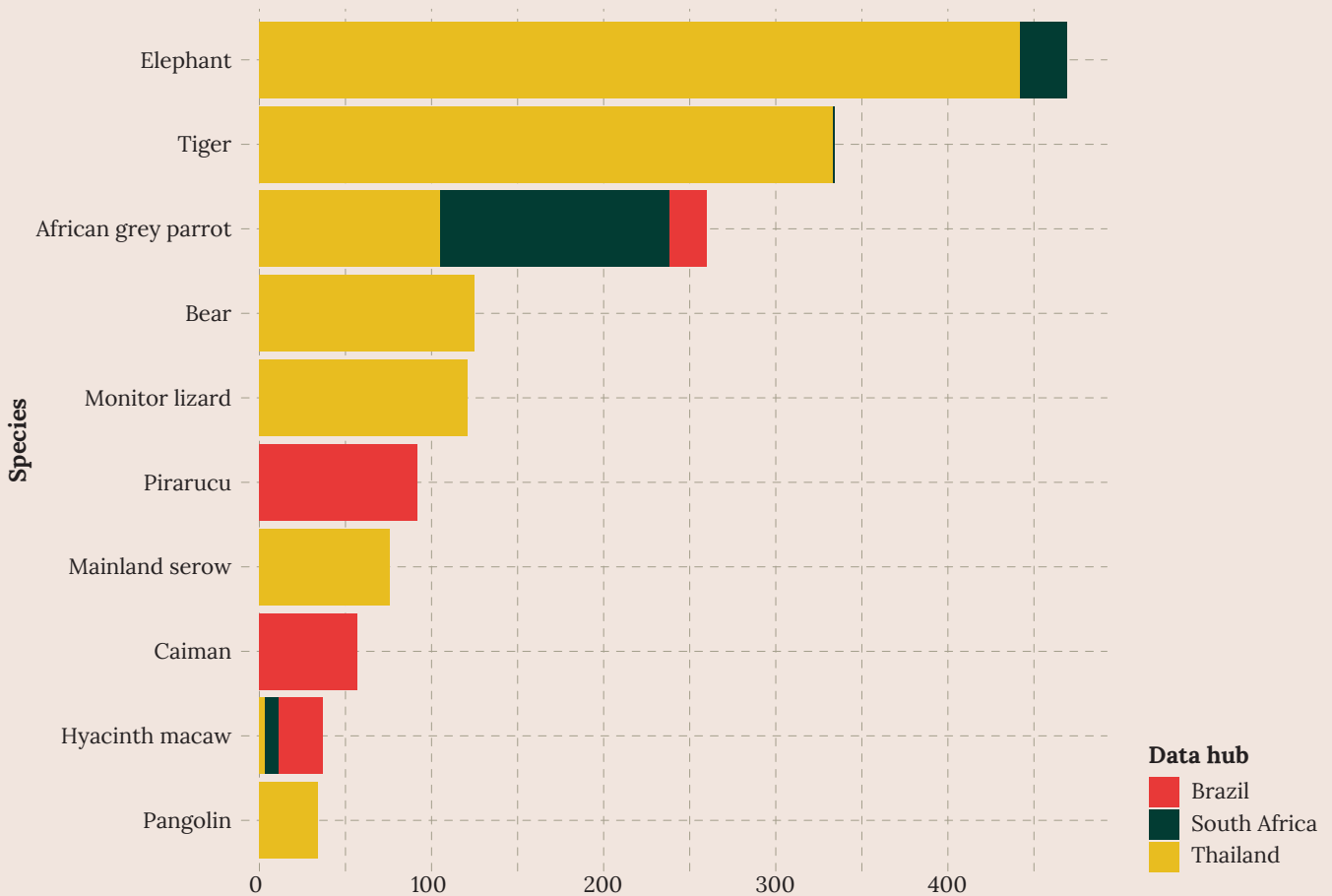


FIGURE 3 Top 10 target species, by number of online advertisements detected by GMS data hubs in Brazil, Thailand and South Africa, August–October 2024.

NOTE: Data for Thailand includes only September and October.

Figure 4 shows the protection status under the CITES Appendices and national legislation for caimans in Brazil, and the top three advertised species in Thailand. Note that national protection of a species does not mean that there is no legal market, but rather that well-defined regulations, along with criminal penalties, restrict capture, trading and/or breeding. All three species have national protection status and are listed in CITES Appendices I and II. The protection status of the top listed species in Brazil and South Africa was previously reported in the October 2024 Global Trend Report.

Caimans are protected at national level and are listed in Appendix I or II of CITES, depending on the species. However, they are now one of the top species detected in Brazil. Despite the multi-level protection status of the species, there are significant levels of online illegal trade, suggesting that the existing regime on biodiversity governance has not been sufficient to keep online markets in check.

COUNTRY	SPECIES	CITES	NATIONAL PROTECTION	NO. OF ADVERTISEMENTS
Brazil	Caiman	I/II	Yes	54
Thailand	Elephant	I/II	Yes	442
Thailand	Tiger	I	Yes	333
Thailand	Bear	I	Yes	123

FIGURE 4 Protection status of caimans in Brazil and the three most advertised species in Thailand, as detected by GMS data hubs, August–October 2024.

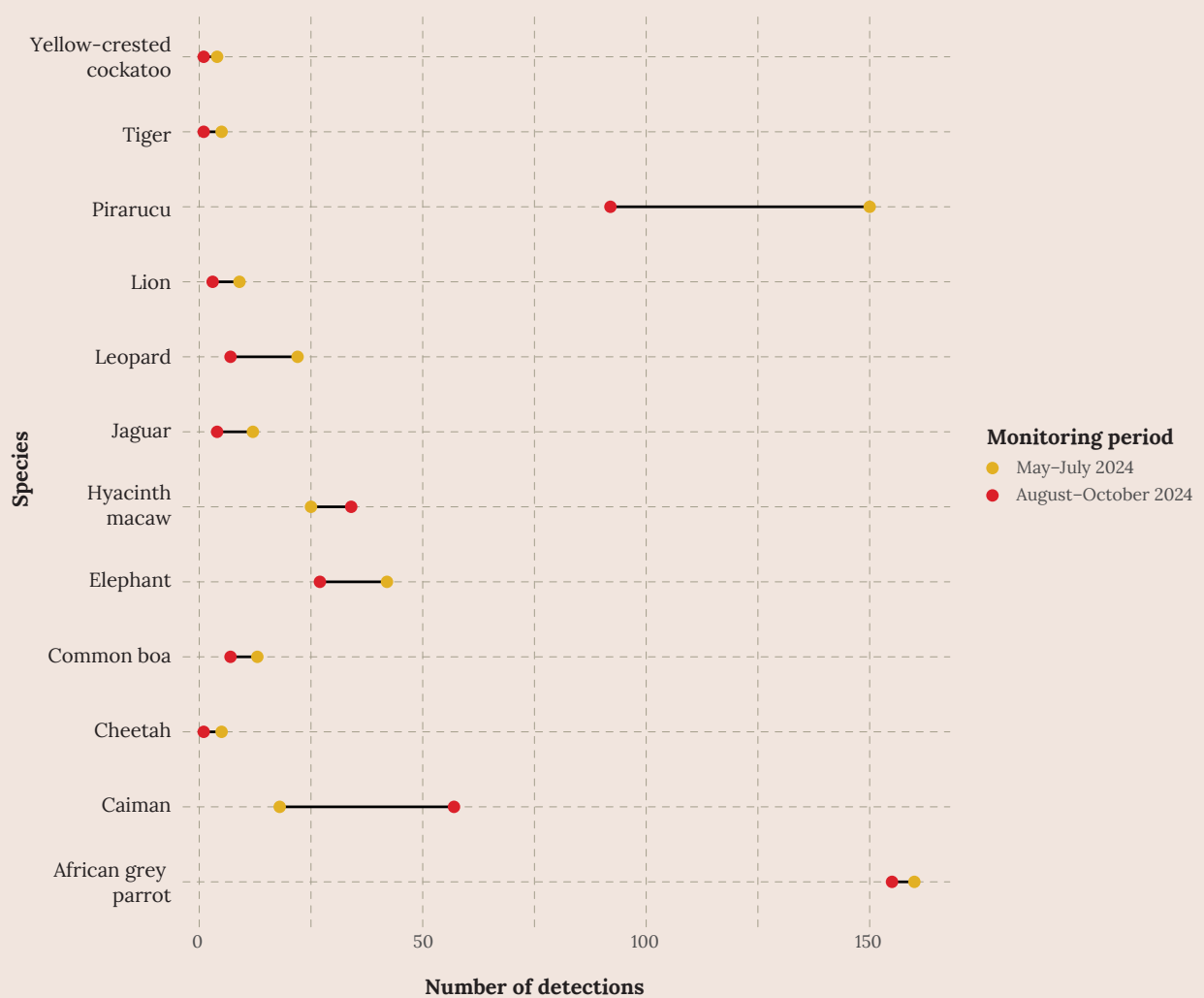



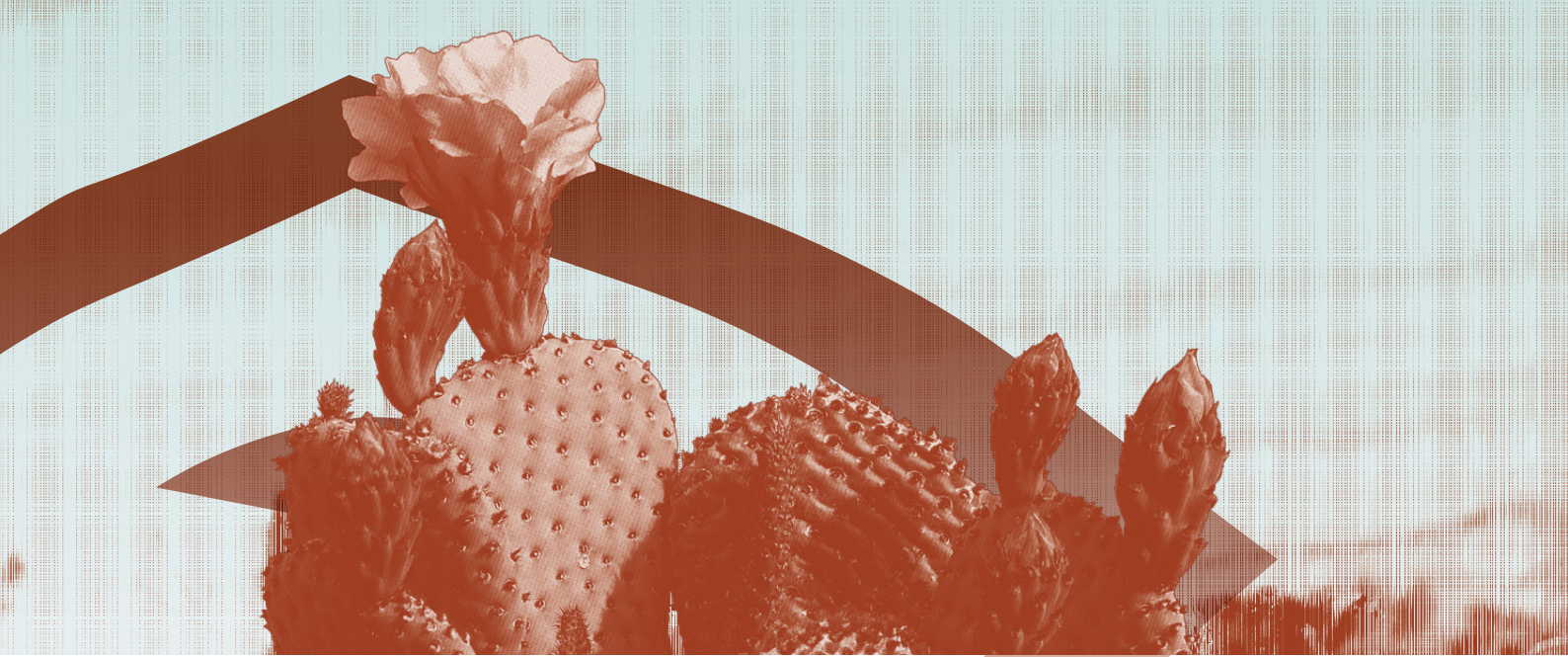
FIGURE 5 Change in the number of adverts per species detected by GMS data hubs in Brazil and South Africa during May–July and August–October 2024, with dots indicating number of detections in each reporting period.

Figure 5 indicates the change in the number of detections per species between May and July and between August and October 2024 in Brazil and South Africa. Thailand is omitted as data was only collected there from September. The dots indicate the number of detections in each reporting period.

There were some notable shifts from one period to the next. There was a decrease of more than 50 detections for pirarucu advertisements and an increase of more than 30 for caimans, moving them into the top 10 species (see Figure 3). In Brazil and South Africa, there was a decrease in the number of detections for all big cat species (i.e. cheetah, jaguar, leopard, lion and tiger). Lastly, there was an increase in detections of advertisements for hyacinth macaws, a species protected under international and national regulations and classified as vulnerable on the IUCN Red List.

KEY POINTS AND RECOMMENDATIONS

- Hundreds of advertisements detected in each country between August and October 2024 indicate that online markets pose a threat to at least 25 protected wildlife species (74% of target species).
- Social media platforms (specifically Facebook) continue to be the primary channel for online marketing of IWT, with e-commerce platforms playing a smaller but still significant role. Facebook alone accounted for 91% of all detections. However, the increasing number of advertisements on e-commerce platforms in South Africa highlights the need to monitor these spaces as well.
- The observed changes in the number of detections for specific species between the two monitoring periods suggest that certain online IWT markets in Brazil and South Africa may be seasonal. Further monitoring is required to draw a definitive conclusion. However, if confirmed, this could provide crucial knowledge for disrupting online IWT supply chains and informing effective policymaking.
- While the size of the online IWT markets in Brazil and South Africa remained virtually the same across reporting periods, the market in Thailand appears to be much larger. In two months of structured monitoring, the number of detections in Thailand exceeded the number of detections in Brazil and South Africa for the same period.
- Given the level of formal international and national protection for the most commonly traded species online, it is clear that effective protection will require increased law enforcement action and other forms of support, such as the intelligence generated by the GMS country hubs. 



UNDERSTANDING THAILAND'S ONLINE ILLEGAL IVORY MARKET

The illegal trade in elephant ivory in Thailand has historically been conducted through physical markets and networks, driven by cultural and religious beliefs that attribute supernatural benefits to ivory products.³ Elephant ivory and its carvings have always been important in Thai culture: the oldest known ivory artefacts date back almost 4 000 years.⁴ Ivory is kept in temples for worship and given as gifts to respected individuals, based on the belief that elephants have protective spiritual guardians.⁵ A recent USAID survey found that 2% of the Thai population owned ivory pieces.⁶

The commercial ivory trade in Thailand began in the late 1930s in Phayuhakhiri, Nakhon Sawan province, initially to meet the demand for religious objects blessed by monks. Early ivory carvings included Buddha amulets, knife handles and animal figurines.⁷ With the growth of international tourism in the 1970s, ivory carving expanded to include products popular with tourists, such as jewellery and East Asian figurines.⁸

With the widespread commercial carving of jewellery and other products, raw ivory is now considered a commodity.⁹ Although declining in use, carved ivory amulets, statues and other objects remain central to Thai Buddhist rituals and spiritual beliefs.¹⁰

Despite the long history of ivory trade in Thailand, recent years have seen a significant shift to digital platforms, such as online marketplaces and social media, which are increasingly being used to sell illegal wildlife products, including elephant ivory.¹¹ The anonymity and wide reach of these platforms allow traders to connect with potential buyers with minimal risk.

Existing research has examined various aspects of the ivory trade in Thailand, including the supply chain, consumer behaviour and market size of both legal and illegal ivory.¹² However, the role of online platforms in facilitating this trade remains under-researched. A 2020 survey by

the wildlife trade monitoring NGO TRAFFIC found that Facebook accounted for 99% of all ivory items offered online in Thailand, highlighting the critical role of these platforms and the need for further analysis of their scale and structure, the evolving dynamics of online trade, and the strategies traders use to evade detection and enforcement measures.¹³

This research aims to address this gap by providing a comprehensive overview of how online marketplaces and social media platforms are being used to facilitate the illegal ivory trade in Thailand. Analysis of the patterns of online ivory trade can inform more effective monitoring and enforcement strategies.

Legislation and regulation of ivory trading

Thailand has several laws and regulations in place to control the trade in elephant ivory and prevent illegal activities. The current Wild Animal Reservation and Protection Act, B.E. 2562 (2019) (WARPA) is the primary legislation governing the treatment of wildlife in Thailand, covering both terrestrial and aquatic species. Asian elephants are classified as 'protected' under WARPA, which means that activities related to them are controlled, hunting is prohibited and commercial use is completely banned. Since the original legislation was passed in 1960, it has been amended several times in response to changing trade dynamics. In 2015, African elephants were included as a protected species, despite not being native to Thailand, as a measure to combat the global illegal ivory trade. In 2019, explicit provisions were added to extend control over the possession and domestic trade of CITES-listed species. The severity of penalties for such offences was also increased, with fines of up to 1 million baht (THB) (approximately US\$32 000) and prison sentences of up to 10 years.

The Elephant Ivory Act B.E. 2558 (2015) was enacted to regulate the domestic trade in ivory in Thailand, in line with international trade agreements, such as CITES, and mounting pressure to combat the illegal ivory trade worldwide. The law strictly prohibits trade in ivory from wild Asian or African elephants, including import and export. It requires individuals and businesses to report ivory possession and trade to the authorities, except for personal or household use within defined parameters.

However, the Elephant Ivory Act, and Thai law more broadly, does permit the domestic trade in ivory derived from domesticated Asian elephants, as defined in the Draught Animals Act B.E. 2482 (1939). This act includes provisions to protect privately owned elephants and requires registration, identification documents and import/export records. In addition, the permit that vendors must obtain for domestic trade restricts them to transacting only at their registered physical location.


Section 8 of the Elephant Ivory Act also exempts certain forms of ivory possession from the requirement to report to authorities. These include all ivory or ivory products, regardless of type or size, that are in the possession of government entities and limited quantities of ivory products for personal, household or general non-commercial use. The latter are restricted to no more than two pieces per person per type of product, with a combined total not exceeding four pieces per person, and a maximum of 12 pieces per household with a total weight not exceeding half a kilogram.

It is important to note that this only applies to elephant ivory acquired before the enactment of the Elephant Ivory Act in 2015. While these items may not be linked to poaching or illegal activities, the lack of retrospective certification processes leaves them undocumented under the law. Certificates of origin, now mandatory for legal trade, cannot be issued for these older stocks, creating an obstacle for those seeking to trade this ivory lawfully.

In addition, the transportation of raw ivory between provinces, which is considered as the movement of animal carcasses, requires a permit along with a certificate of origin for elephant ivory, as required by the Animal Epidemics Act B.E. 2558 (2015).

CLASSIFICATION OF ELEPHANTS UNDER THAI LAW

Thai law classifies elephants into three categories:

- **Wild Asian elephants** (*Elephas maximus*) are protected under WARPA (2019), which strictly prohibits trade in ivory or any parts of wild Asian elephants.
- **Domesticated Asian elephants** (*Elephas maximus*) are recognized under the Draught Animals Act as legal sources for the ivory trade. Ivory derived from domesticated Asian elephants can be traded domestically under strict regulations and in compliance with the provisions of the Elephant Ivory Act.
- **African elephants** (*Loxodonta africana*) are also protected under WARPA. The trade, import and export of ivory from African elephants is banned in Thailand. 

Shifting trade dynamics and enforcement challenges

Tightened regulations and increased enforcement efforts targeting the ivory trade in traditional physical marketplaces appear to have led to a significant shift to online platforms. Before the enactment of the Elephant Ivory Act in 2015, ivory products were widely sold in prominent markets such as the Chatuchak Market and the Tha Phra Chan Amulet Market, both located in Bangkok. A TRAFFIC survey of Bangkok's ivory market between December 2014 and June 2016 showed a dramatic decline in the availability of ivory in these physical retail locations. In December 2014, over 7 400 ivory items were recorded in Bangkok markets; by June 2016, this number had fallen to just 283. Similarly, the number of retail shops selling ivory decreased from 47 to only 5, illustrating the effectiveness of increased enforcement in reducing the open availability of ivory.¹⁴

In response, traders have shifted to online platforms where monitoring and enforcement are less stringent. In a separate study conducted between June and July 2016, TRAFFIC found at least 2 550 ivory items for sale online, significantly more than were available in physical markets during the same time period. Facebook and Instagram were identified as popular venues for posts advertising ivory jewellery and other decorative products.¹⁵

Several enforcement challenges and legal loopholes contribute to the persistence of the illegal ivory trade, particularly through online platforms. As noted above, sellers of legally traded ivory from

domestic Asian elephants must adhere to strict permit conditions, including that transactions take place only at the vendor's registered physical location. This effectively prohibits online sales. However, ivory remains readily available on social media platforms, highlighting a gap in enforcement that enables online trade.

The registration and tracking requirements under existing ivory regulations pose further challenges, as Thailand's regulatory framework is notably complex and can be difficult to navigate. For example, permits for transporting raw ivory between provinces require a certificate of origin, which is not obtainable for older ivory stocks. This is a significant obstacle for those wishing to trade historical ivory legally and may also discourage compliance, particularly for those trading in smaller ivory items.¹⁶ These complexities make enforcement difficult and can open the system to exploitation by those trading in illegally sourced ivory.¹⁷

In addition, the elephant identification methods mandated by the Draught Animals Act relied on basic rough sketches of the elephant's features and noticeable marks. These methods were insufficient for accurately tracing the origins of ivory. Before the reforms of the 2014 National Ivory Action Plan, domestic elephants could be registered within an eight-year timeframe, creating a loophole that effectively allowed illegally captured wild elephants to be registered as domestic. The reforms reduced the registration period to 90 days from birth and implemented a more robust identification system, including elephant IDs linked to DNA data.¹⁸

Despite these changes, effective enforcement remains a challenge, but is essential to prevent illegally obtained ivory from infiltrating the domestic market. While DNA testing and spectroscopic analysis could help distinguish the legal origin of ivory,¹⁹ these methods are currently underutilized in Thailand and often limited to sporadic checks. The establishment of electronic databases and enhanced software systems to monitor the ivory trade could also improve coordination among enforcement agencies and reduce the entry of illegal ivory into the market.²⁰

Monitoring the online trade

From September to November 2024, the GMS data hub in Thailand detected 807 elephant-related advertisements on online platforms. These were primarily found on Facebook and e-commerce sites, reflecting the ongoing use of digital marketplaces to trade illegal wildlife products. Over the three-month monitoring period, the volume of advertisements detected showed a notable increase: 201 adverts were recorded in September, 257 in October and 349 in November. In order to systematically analyze and classify the advertisements, six categories were developed based on the nature and material of the products advertised (see Figure 6).

CATEGORY	DESCRIPTION	EXAMPLE
Jewellery and ornaments	Items crafted from elephant ivory and designed for personal adornment – e.g. necklaces, bracelets, rings and beads.	
Raw ivory	Unprocessed or minimally altered ivory, often marketed for further crafting or sale – e.g. ivory tusks, chunks or pieces, sheets of ivory and ivory powder.	
Figurines and sculptures	Crafted ivory artworks, often depicting religious, cultural or artistic themes – e.g. carved ivory figurines, deity or animal sculptures, and intricate relief panels.	
Functional items	Ivory objects for practical use – e.g. knife handles, combs, utensils or tools with ivory components.	
Non-ivory	Non-ivory elephant parts – e.g. elephant bones, skin, hair, nails or temporin (pictured).	
Other	Ivory items that do not fit into the above categories or whose specific nature is unclear – e.g. chess pieces or collectibles.	

FIGURE 6 Categories of elephant-related products in advertisements detected by the GMS data hub in Thailand.

Photos: Social media

Raw ivory accounted for 45.1% of the detected advertisements during the research period, making it the most frequently advertised category of elephant products and indicating a significant demand for unprocessed ivory that can be carved or used for a variety of purposes. This level of demand is particularly concerning, as it is likely to exceed what could be legally sourced from either historical stocks or domesticated elephants, suggesting that illegally sourced ivory is being offered to meet existing demand.

Jewellery and ornaments accounted for 36.1% of the adverts. These included items such as bracelets, necklaces and rings, which have cultural and symbolic value in Thailand and are often marketed as talismans or status symbols. Ivory figurines and sculptures appeared in 10.8% of the advertisements; functional items represented 5.7%, showing a smaller but persistent market for practical ivory goods; and 1.4% were classified as other. The remaining 1% of adverts were for non-ivory elephant products, commonly bones or hair, which may be used for traditional remedies or ceremonial purposes.

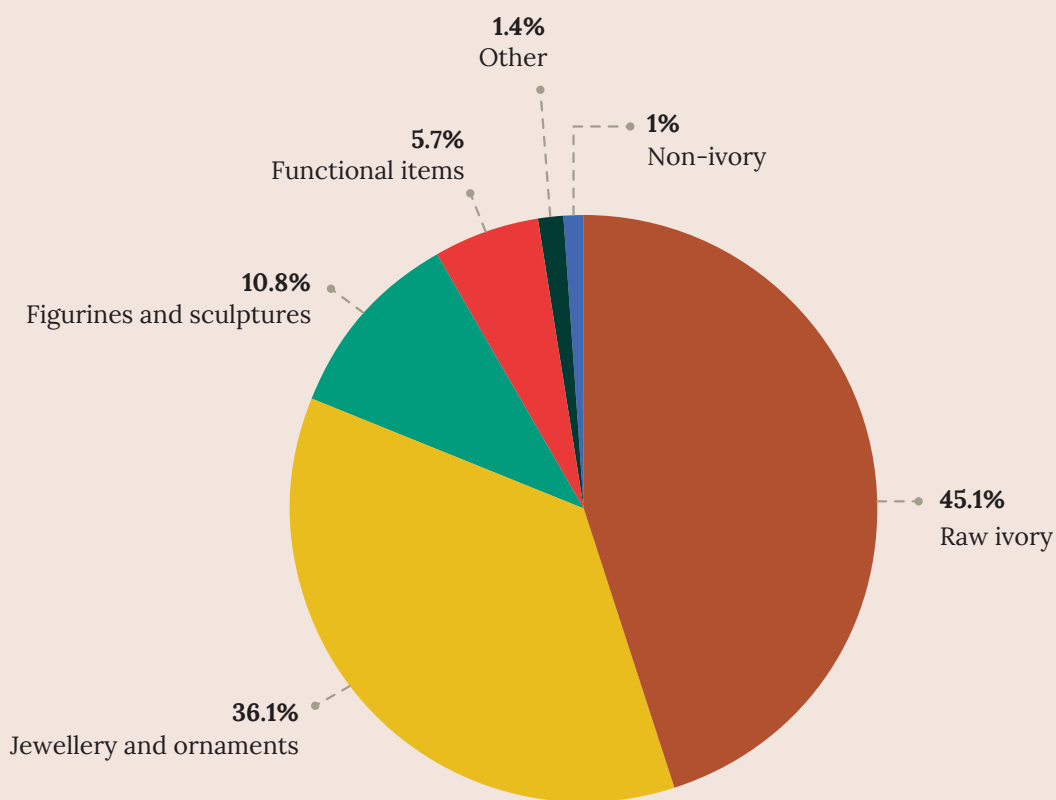


FIGURE 7 Distribution of elephant-related products by category in advertisements detected by the GMS data hub in Thailand, September–November 2024.

NOTE: The percentages have been rounded to one decimal place, which may result in a total slightly above or below 100%.

Price transparency – whether the price is provided or only available on request – and the average price of items also varied across categories. Raw ivory had the highest rate of price transparency at 72.5%, followed by functional items at 54.3%, jewellery and ornaments at 48.1%, other items at 27.3%, figurines and sculptures at 25.3% and non-ivory products at 25%.

Figurines and sculptures had the highest average price at THB6 486 (US\$190), followed by raw ivory at THB6 434 (US\$188), functional items at THB3 425 (US\$100), jewellery and ornaments at THB3 274 (US\$96), non-ivory products at THB1 500 (US\$44) and other items at THB1 060 (US\$31).²¹ The high rate of price transparency in raw ivory advertisements, combined with the significant variation in prices, reflects the value placed on raw ivory and the presence of a well-established online market for it.

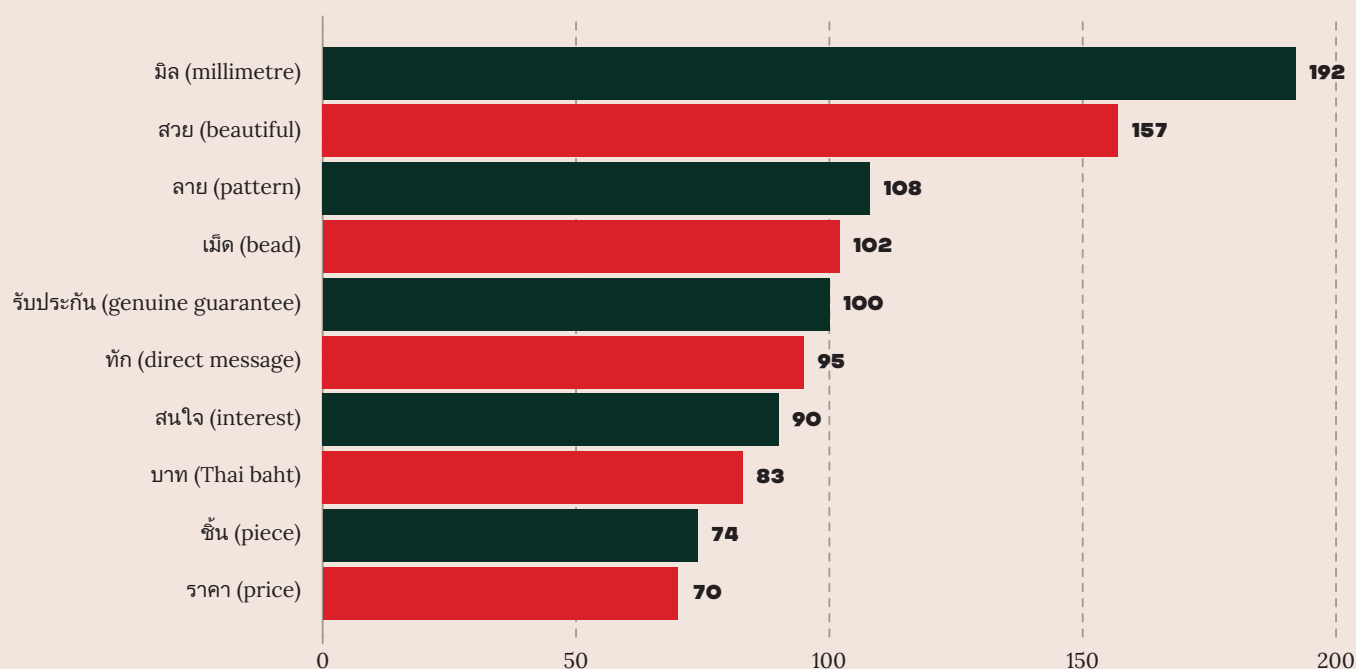


FIGURE 8 Top 10 keywords used in elephant-related advertisements detected by the GMS data hub in Thailand.

The texts of elephant-related advertisements had an average length of 57 characters, demonstrating the concise descriptions that sellers use to attract buyer interest. The 10 most frequently used words were มิล (millimetre) – 92 mentions; สวย (beautiful) – 157 mentions; ลาย (pattern) – 108 mentions; เม็ด (bead) – 102 mentions; รับประกัน (genuine guarantee) – 100 mentions; ทัก (direct message) – 95 mentions; สนใจ (interest) – 90 mentions, บาท (Thai baht) – 83 mentions; ชิ้น (piece) – 74 mentions; ราคา (price) – 70 mentions.

The frequency of words such as มิล (millimetre) and เม็ด (bead) reflects the number of advertisements for small ivory pieces often used in jewellery. The prominence of ลาย (pattern) as a keyword is linked to Schreger lines, a visible crosshatch pattern unique to genuine elephant ivory that helps buyers distinguish it from counterfeits. The frequency of this keyword indicates that

sellers want to assure buyers of the authenticity of their product. The use of รับประกัน (genuine guarantee) similarly highlights concerns among buyers about counterfeits in the online ivory market. These are likely to be exacerbated by the impossibility of inspecting or verifying products before purchasing. Sellers mitigate this by offering guarantees and refund conditions. Meanwhile, the emphasis on private communication, as signalled by ทัก (direct message), demonstrates a core strategy to mitigate the risk of detection. By moving discussions to private channels, sellers limit their exposure to monitoring and detection by law enforcement.

Notably, the words งา (ivory) and ช้าง (elephant) were not observed in advertisements. Alternative variations of งา (ivory) were occasionally seen, suggesting the strategic use of coded language to avoid detection. In addition, the elephant emoji (🐘) was used more than 800 times to indicate 'ivory', a clear strategy to evade detection. The aeroplane emoji (✈️) was also commonly used to indicate items ready for delivery.


โดนัด 🐘 ใหญ่สวย 14 มิล ลายจัด 🐘
ไซร์ 60 งานสวยมาก 🐘
✅ พารา 5500.บ รวมส่ง ✈️ ราคานี้หาไม่ได้แล้ว
รับประกันตลอดชีพ



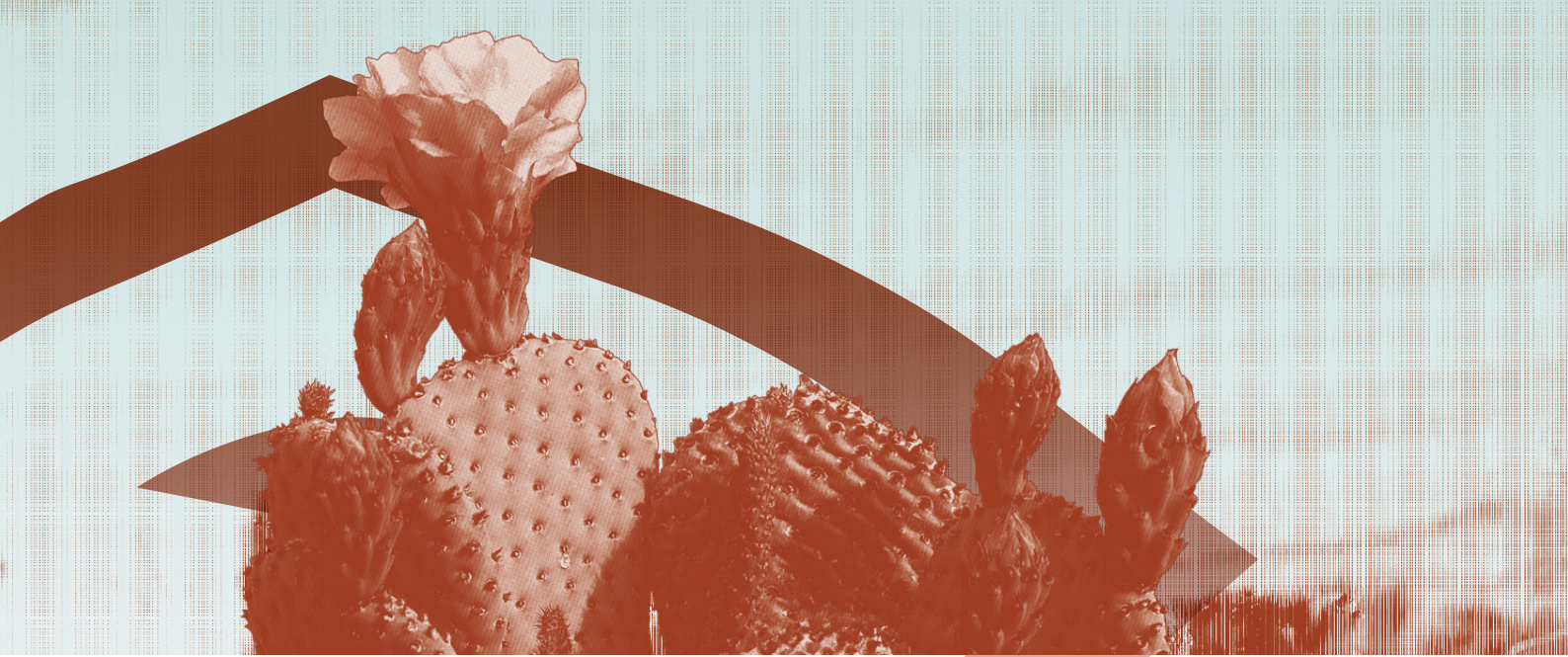
An online advertisement for ivory, utilizing the elephant emoji to avoid detection. *Photo: Social media*

The use of coded language and images to evade detection, combined with the other data gathered by the GMS hub in Thailand, highlights the ways in which online marketplaces and social media platforms are being co-opted to facilitate the illegal ivory trade in Thailand. Of particular significance here is the prevalence of advertisements for raw ivory, raising concern about the size of the demand and the legality of how it is being met. Shortcomings in Thai law and the difficulties in monitoring and enforcing the online ivory trade are significant obstacles to controlling it.

RECOMMENDATIONS

- Online data should be used to support the intelligence-led law enforcement responses that are crucial to effectively address illegal online markets.
- Determining the origin and legality of ivory products on the market is challenging but essential. Law enforcement should make better use of DNA testing and spectroscopic analysis.
- The establishment of electronic databases and enhanced software systems to monitor the ivory trade could also improve coordination among enforcement agencies and reduce the entry of illegal ivory into the market.
- Structural loopholes in Thai legislation should be addressed, with stronger law enforcement measures to ensure compliance with existing regulations, particularly those that effectively prohibit the online sale of ivory from domesticated elephants.
- An accessible database of government-registered elephant ivory sellers and their permitted activities should be established. This will allow buyers to verify the legitimacy of sellers and reduce the risk of unintentionally supporting illegal trade. 





ROOTED IN CRIME: EXPLORING THE ILLEGAL FLORA TRADE

The global trade in wild plants involves as many as 30 000 species, many of which are taken from the wild and used in modern and traditional medicines, health supplements, cosmetics, furniture and food products. Other plants are sought after by hobbyists and horticulturalists for ornamental purposes. A significant proportion of the demand for ornamental plants is met by nurseries and other retail outlets, supplied by artificial propagation or from ostensibly legal and sustainable wild-sourcing.

The United Nations Office on Drugs and Crime (UNODC) has estimated the average annual value of the legal trade in CITES-listed plant species at US\$9.3 billion between 2016 and 2020,²² based on declared import values and wholesale market prices.²³ Despite the available data from law enforcement seizures, the true scale of the illegal plant trade is unknown. However, the high international demand for succulents and other valuable ornamental or rare plant species, coupled with limited sustainable economic opportunities and inadequate protection of natural habitats, including the absence of physical barriers, has led to the indiscriminate and often illegal harvesting of plants from the wild.²⁴

As with the trade in fauna,²⁵ online marketplaces play an increasing role in facilitating the flora trade, particularly when it comes to rare and threatened species. The internet offers global reach and easily connects sellers and buyers interested in species-specific products.²⁶ To date, monitoring of online IWT has focused mainly on fauna, and there is growing concern about the high levels of online trade in flora and the gaps in our knowledge of its dynamics.²⁷

The global illicit trade in flora

The illegal plant trade is a rapidly evolving area of environmental crime with serious impacts on biodiversity and local economies.²⁸ Globally, the trade targets a range of high-value species. Rosewood, a type of timber prized for luxury furniture, ranks among the most trafficked plant commodities globally; clivias and wild-growing cactuses are increasingly targeted for international markets;²⁹ and dudleyas, a family of succulents, are valued for their unique colour characteristics and shapes.³⁰ While there is legal trade in many of these species, plants are frequently harvested illegally, driven by high demand for rare and threatened species, or those with aesthetic appeal or medicinal value.

International demand for illegally traded plants is driven by cultural, economic and aesthetic factors. Collectors' markets value rarity and exclusivity, and some plants are seen as status symbols or even investments. Timber species such as rosewood are trafficked for use in making high-end furniture and decorative items. The growing popularity of exotic plants for ornamental purposes, amplified by social media and online marketplaces, has broadened the consumer base by making formerly niche interests more mainstream. Traditional medicine practices further fuel demand, as certain plant species are believed to have medicinal or spiritual properties.³¹

These dynamics, combined with limited legal supply chains, incentivize traffickers to exploit wild populations to meet market demand. Specialized illicit markets for succulents and orchids cater specifically to collectors, who are often willing to pay a premium for rare and wild-sourced specimens, regardless of legality.³² Bulk markets circumvent time-consuming propagation by harvesting wild species for ornamental and horticultural purposes.

The impact of plant poaching is far-reaching. Plants play a critical role in ecosystems, maintaining soil stability, providing food and shelter for wildlife, and contributing to the overall ecological balance. The removal of rare and endemic species from their natural habitats can lead to population declines and extinction in the wild. The loss of flora undermines conservation efforts and ecotourism, on which many local communities rely for their livelihoods. Illegal harvesting also deprives regions of potential revenue from sustainable legal trade, while simultaneously flooding markets with illegally sourced products that undercut legal, regulated products. Cultural and medicinal practices tied to these plants are also jeopardized as species vanish from their native landscapes.

According to TRAFFIC's Wildlife Trade Portal, between 1 December 2019 and 31 December 2024, there were 3 540 seizures of plants by law enforcement agencies worldwide.³³ Between 2019 and May 2024, more than 1.6 million individual succulent plants were seized by law enforcement in South Africa alone, reflecting the scale and persistence of the illegal plant trade.³⁴ Figure 9 shows the sharp increase in seizures particularly since 2020. Restrictions imposed to combat COVID-19 led to an increase in demand for house plants internationally, and as socio-economic challenges worsened in source countries, impoverished communities were recruited to harvest wild plants to generate an income.³⁵ However, actual levels of plant trafficking are likely to be far greater than the recorded seizures demonstrate,³⁶ as seizures only reflect cases where law enforcement has successfully intercepted consignments of trafficked plants, and thus often represent only a fraction of the trade. Many incidents go undetected due to limited resources, lack of specialized training or difficulties in identifying plants during inspections, particularly for species that closely resemble legal plants. Traffickers also adapt to enforcement efforts by changing smuggling methods, routes and packaging techniques to evade detection. In addition, systemic gaps in the reporting and recording of seizure data may result from the lack of centralized databases or consistent reporting mechanisms across countries, leading to under-reporting or fragmented records.

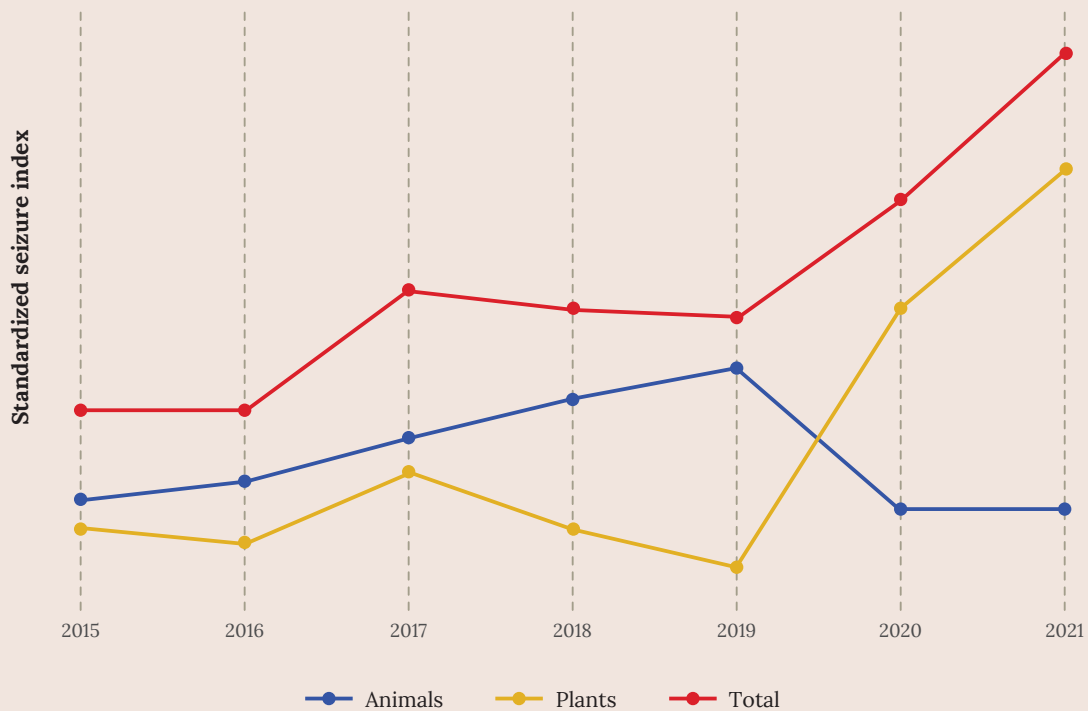


FIGURE 9 Seizure trends, 2015–2021, showing plants and animals.

NOTE: Seizures are based on the UNODC’s standardized seizure index and given as an expression of relative value.

SOURCE: UNODC, World wildlife crime report 2024, p 16

Plant trafficking is a global problem. In the US, dudleyas are stolen from the wild in California to supply demand in Korea and China.³⁷ In South America, cactuses are collected from the wild regions such as Chile’s Atacama desert, destined for international markets in Asia and Europe (see Figure 10).³⁸ In South Africa, the Western and Northern Cape provinces have become epicentres of plant poaching,³⁹ targeting a global biodiversity hotspot known as the Succulent Karoo biome, and trafficked to meet the demands of niche collectors in Europe and Asia. Traffickers are not constrained by jurisdictional borders, however; poaching from South Africa extends into south-west Namibia, for example, where succulents from the Gariiep Centre of Endemism are also targeted.⁴⁰

International markets play a notable role in driving demand for protected plants, with traffickers exploiting established trade routes to move wild-harvested plants from source countries to international destinations. In South Africa, succulents are smuggled through key exit points, such as OR Tambo International Airport in Johannesburg, Cape Town International Airport and land border crossings into Mozambique and Namibia.⁴¹ These plants are often concealed among legal goods or misdeclared to avoid detection. More creative smuggling methods are also often used, including disguising plants as everyday items by wrapping them in toilet paper or labelling them as children’s toys. In one case, 12 000 succulents were disguised as mushrooms for shipment to China.⁴² These routes frequently overlap with those used for other illicit commodities, such as rhino horn and abalone, highlighting potential intersections of serious organized crime.⁴³ Plant trafficking also draws parallels with abalone trafficking in the way poachers are paid – either in cash or drugs.

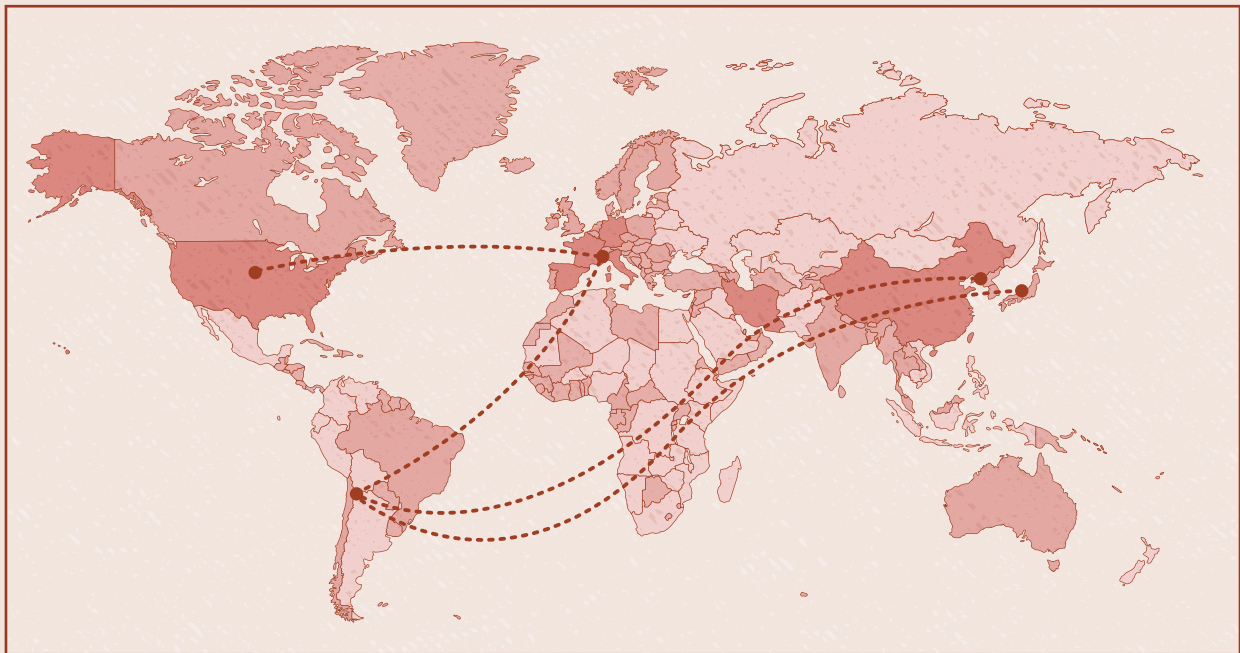


FIGURE 10 Illegal trade routes for endangered cactuses taken from the wild in the Americas.

SOURCE: Adapted from Sandy Masuo, Raising awareness about the illegal plant trade, The Huntington, 13 August 2024, <https://huntington.org/verso/raising-awareness-about-illegal-plant-trade>

Plant trafficking in the digital world

The illegal plant trade has increasingly moved online. Like the trade in fauna, plant trafficking leverages digital platforms to facilitate every stage of the supply chain, from poaching to consumer sales. Traffickers often begin by using biodiversity websites, online plant forums and social media platforms to locate rare specimens. Unlike fauna, plant specimens remain in place in the wild, making them easier to collect. Photos uploaded by plant enthusiasts or researchers, particularly those with precise locations, provide the information needed to locate plants in the wild. Criminal networks use this information to identify target areas for poaching.⁴⁴ In some cases, traffickers reside in the source countries and poach the plants independently; in other cases, they use the internet to solicit plants from people in the source countries.⁴⁵

Once harvested, the plants are marketed online through social media platforms, e-commerce websites and specialized forums. In one case, two Spanish citizens were apprehended in South Africa following a poaching expedition in South Africa and Namibia in 2015. Authorities seized more than 2 000 succulents and evidence that many more plants had already been sent to Spain. The couple sold the poached plants through an e-commerce website and offered international shipping, taking advantage of the ease with which poached plants can be transported using commercial parcel carriers.⁴⁶

Encrypted messaging apps such as WhatsApp, Telegram and WeChat play a crucial role in facilitating transactions by allowing traffickers to share photographs, discuss prices and arrange logistics discreetly. Buyers range from private collectors to large-scale resellers who purchase plants in bulk and distribute them internationally. Profits from plant trafficking are laundered through unregulated channels such as cryptocurrencies.⁴⁷



South Africa has banned the wild harvesting of *Conophytum* succulents, but poaching is rife. *Photo courtesy SANBI*

Efforts to combat plant trafficking

Like other forms of IWT, the online trade in plants presents complex challenges for law enforcement. The anonymity of digital platforms makes it difficult to trace sellers or buyers, particularly when fake profiles and encrypted communications are used. The vastness of the internet also overwhelms enforcement efforts, as new listings can be posted faster than they can be detected and removed. The volume of legitimate online plant trade further complicates the issue, requiring great effort and expertise to identify illegal listings, even more so than with fauna. The platforms themselves lack the expertise or incentive to proactively identify and remove illegal listings. The use of online botanical and tourism platforms to locate plant specimens offers its own challenges. Innovative monitoring tools, cross-border collaboration and partnerships with tech companies are needed to disrupt the online plant trade effectively.

Enforcement efforts are also complicated by corruption and limited resources and capacity. In many countries, enforcement agencies are understaffed and poorly equipped to handle the scale and sophistication of plant trafficking networks. Detection and monitoring efforts are inevitably difficult in the vast remote areas where poaching often occurs, leaving many ecosystems vulnerable. Additionally, gaps in legislation, particularly for non-CITES-listed species, create regulatory blind spots that traffickers frequently exploit. The global nature of the trade also poses jurisdictional challenges. Trafficked plants can cross multiple borders, requiring seamless international collaboration that can be hindered by differing laws, priorities and enforcement capacities. As with wildlife trafficking more broadly, these issues combine to make countering plant trafficking a complex and ongoing struggle.


Despite the challenges, some of the countries most affected by plant trafficking are responding proactively. South Africa is implementing its National Response Strategy and Action Plan to Address the Illegal Trade in South African Succulent Flora,⁴⁸ as well as a National Integrated Strategy to Combat Wildlife Trafficking.⁴⁹ This includes listing local at-risk species in CITES Appendices, engagement with communities, and increased staffing and training for law enforcement and border agencies on plant-related IWT.⁵⁰ South African law enforcement has

made numerous arrests to disrupt trafficking networks, with convicted offenders receiving lengthy prison sentences.⁵¹ In 2023, for example, a man was sentenced to 10 years in prison after being caught with 2 850 plants, including large trophy plants, allegedly worth more than 9 million rand (US\$475 000) on the international market.⁵² In 2023, Namibia established the Protected Plants Task Team, an inter-agency collaboration between the Ministry of Environment, Forestry and Tourism, the police force and the revenue agency.⁵³

Innovative responses to plant trafficking make use of technology and collaboration. AI-powered monitoring systems and web-scraping algorithms are being deployed to detect illegal plant listings on e-commerce sites and social media platforms. For example, the University of Southampton's FloraGuard project uses AI to identify patterns in online trade that can inform conservation and trade policy interventions.⁵⁴ In the Peruvian Amazon, drones and satellite imaging are being used to monitor remote areas for signs of illegal harvesting and deforestation.⁵⁵ These technological advancements, if combined with increased cross-border cooperation and public-private partnerships, offer promising ways to disrupt plant trafficking networks and protect biodiversity. Other strategies look to mitigate the illegal trade by increasing the availability of desired plant species, for example through the off-site propagation of confiscated plants by legitimate, licensed nurseries.⁵⁶

Although some progress has been made in combating plant trafficking, it is a complex problem that requires a multifaceted approach and a combination of regulatory, enforcement, technological innovation and community-based measures. The online elements of plant trafficking specifically deserve greater attention, as do online strategies to counter it. Investment in capacity building for enforcement agencies is critical, including training, resources and technology to monitor and intercept online trafficking networks effectively. Public awareness and demand reduction are also crucial components of the response. Social media and other digital platforms can be used to highlight the impact of plant poaching and to encourage consumers to question the origin of plants and choose sustainable, legally sourced alternatives to wild-collected plants. Wider collaboration among governments, NGOs and the private sector will ensure a coordinated and innovative response to dismantle trafficking networks and safeguard the world's unique flora.

RECOMMENDATIONS

- Capacity should be built in enforcement agencies through the provision of training, resources and technology to monitor and disrupt online plant trafficking networks.
- Priority should be given to fostering partnerships between government agencies and local communities to provide alternative livelihoods and empower them as stewards of biodiversity.
- The cultivation of protected plants by nurseries and botanical gardens should be promoted to reduce pressure on wild populations and to meet market demand.
- Awareness campaigns should be conducted to inform consumers and sellers about the ecological consequences of the illegal plant trade, in order to shift demand towards legally and sustainably sourced plants. 



NOTES

- 1 Daan P van Uhm, *The Illegal Wildlife Trade: Inside the World of Poachers, Smugglers and Traders*, London: Springer, 2016.
- 2 ECO-SOLVE, Monitoring online illegal wildlife trade: Insights from Brazil and South Africa, Global Trend Report, Global Initiative Against Transnational Organized Crime (GI-TOC), October 2024, <https://globalinitiative.net/analysis/monitoring-online-illegal-wildlife-trade-online-brazil-and-south-africa>.
- 3 USAID, Consumer research findings on ivory and tiger products in Thailand, 4 June 2018, https://www.usaidrdw.org/resources/reports/inbox/infosheet-thailand-ivory-and-tiger_4june2018_eng_final.pdf/view.
- 4 S Na Nakhonphanom, Masterpieces in the Fine Arts Department: Prehistoric ivory ornaments in Thailand, *Silpakorn Journal*, 56, 2013, 117-127, <https://www.finearts.go.th/storage/contents/file/YuplqKKo0d2SDrrirCTQb3n7FCL0AkD-vMVBsr4xZ.pdf>.
- 5 Bangkok Biz News, Elephant ivory: Trading beliefs, 17 December 2014, <http://bangkokbiznews.com/blog/detail/623554>.
- 6 USAID Wildlife Asia, Quantitative and Study of Consumer Demand for Wildlife Products in Thailand, 5 June 2018, https://pdf.usaid.gov/pdf_docs/PA00Z2N9.pdf
- 7 Daniel Stiles, Ivory carving in Thailand, *Asian Art*, 14 August 2003, <http://asianart.com/articles/thai-ivory/index.html>; Daniel Stiles, The elephant and ivory trade in Thailand, TRAFFIC, June 2009, <https://www.traffic.org/publications/reports/the-elephant-and-ivory-trade-in-thailand/>.
- 8 Daniel Stiles, Ivory carving in Thailand, *Asian Art*, 14 August 2003, <http://asianart.com/articles/thai-ivory/index.html>.
- 9 Ibid.
- 10 Bryan Christy, Ivory worship, *National Geographic*, September 2012, <https://www.nationalgeographic.com/magazine/article/blood-ivory>.
- 11 TRAFFIC, Survey of online ivory trade in Thailand, July 2020, <https://www.traffic.org/site/assets/files/12981/three-country-ivory-report.pdf>.
- 12 Apinya Chaitae, The sustainability of the elephant ivory trade in Thailand: Demand, supply and controls, PhD thesis, James Cook University, <https://doi.org/10.25903/7p1a-9a97>; Naomi Doak, Polishing off the ivory: Surveys of Thailand's ivory market, TRAFFIC, 2014, <https://www.traffic.org/site/assets/files/8410/thailand-market-survey-report.pdf>; USAID, Consumer research findings on ivory and tiger products in Thailand, 4 June 2018, https://www.usaidrdw.org/resources/reports/inbox/infosheet-thailand-ivory-and-tiger_4june2018_eng_final.pdf/view.
- 13 TRAFFIC, Survey of online ivory trade in Thailand, July 2020, <https://www.traffic.org/site/assets/files/12981/three-country-ivory-report.pdf>.
- 14 Kanitha Krishnasamy, Tom Milliken and Chution Savini, In transition: Bangkok's ivory market, TRAFFIC, September 2016, <https://www.traffic.org/publications/reports/in-transition-bangkoks-ivory-market>.
- 15 Naomi Doak, Polishing off the ivory: Surveys of Thailand's ivory market, TRAFFIC, 2014, <https://www.traffic.org/site/assets/files/8410/thailand-market-survey-report.pdf>.
- 16 Apinya Chaitae et al, Protection of elephants and sustainable use of ivory in Thailand, *Oryx*, 56, 4 (2022), pp 601-608, <https://www.cambridge.org/core/journals/oryx/article/protection-of-elephants-and-sustainable-use-of-ivory-in-thailand/23E9D57E6167698C4991A98210F89585>.
- 17 Ibid.
- 18 Piyaporn Wongruang, Special report: Dealing with the elephant in the room – ivory trade, *The Nation Thailand*,

- 30 October 2018, <https://www.nationthailand.com/perspective/30357559>.
- 19 Dorothy Parungao et al, On the use of in-situ spectroscopic techniques for the study of the provenance of historic ivories, *Journal of Cultural Heritage*, 68 (2024), pp 205–215, <https://doi.org/10.1016/j.culher.2024.05.018>.
- 20 Ibid.
- 21 The price data presented does not account for variations in size or weight of products across categories. Additionally, for items like raw ivory, pricing by weight may not be explicitly indicated in the advertisements, potentially affecting comparisons.
- 22 UNODC, World wildlife crime report 2024, https://www.unodc.org/documents/data-and-analysis/wildlife/2024/Wildlife2024_Final.pdf.
- 23 Ibid.
- 24 South African National Biodiversity Institute (SANBI) et al, National response strategy and action plan to address the illegal trade in South African succulent flora, February 2022, <https://www.sanbi.org/wp-content/uploads/2022/08/Succulent-strategy-and-action-plan.pdf>.
- 25 ECO-SOLVE, Monitoring online illegal wildlife trade: setting the stage – past, current and future efforts, Global Trend Report, GI-TOC, June 2024, <https://globalinitiative.net/analysis/monitoring-online-illegal-wildlife-trade>.
- 26 TRAFFIC, Joint conservation and e-commerce action to urgently combat illegal plant trade, 4 September 2024, <https://www.traffic.org/news/joint-conservation-and-e-commerce-action-to-urgently-combat-illegal-plant-trade>.
- 27 Royal Botanic Gardens Kew, FloraGuard: Tackling the illegal trade in endangered plants, 9 October 2020, https://generic.wordpress.soton.ac.uk/floraguard/wp-content/uploads/sites/249/2020/10/FloraGuard_Report.pdf.
- 28 UNODC, World wildlife crime report 2024, https://www.unodc.org/documents/data-and-analysis/wildlife/2024/Wildlife2024_Final.pdf.
- 29 Sandy Masuo, Raising awareness about the illegal plant trade, The Huntington, 13 August 2024, <https://huntington.org/verso/raising-awareness-about-illegal-plant-trade>.
- 30 Smugglers caught trafficking thousands of stolen California succulents, CBS News, 20 April 2018, <https://www.cbsnews.com/sanfrancisco/news/smugglers-caught-illegally-ship-native-california-succulents-abroad>.
- 31 ECO-SOLVE, Monitoring online illegal wildlife trade: Insights from Brazil and South Africa, Global Trend Report, GI-TOC, October 2024, <https://globalinitiative.net/analysis/monitoring-online-illegal-wildlife-trade-online-brazil-and-south-africa>.
- 32 UNODC, World wildlife crime report 2024, May 2024, https://www.unodc.org/documents/data-and-analysis/wildlife/2024/Wildlife2024_Final.pdf.
- 33 TRAFFIC, Wildlife Trade Portal, <https://www.wildlifetrade-portal.org>.
- 34 TRAFFIC, A succulent trade: The legal and illegal trade in succulent flora stemming from South Africa, December 2024, https://www.traffic.org/site/assets/files/26240/succulents_report.pdf.
- 35 Ibid.
- 36 UNODC, World wildlife crime report 2024, May 2024, https://www.unodc.org/documents/data-and-analysis/wildlife/2024/Wildlife2024_Final.pdf.
- 37 Smugglers caught trafficking thousands of stolen California succulents, CBS News, 20 April 2018, <https://www.cbsnews.com/sanfrancisco/news/smugglers-caught-illegally-ship-native-california-succulents-abroad>.
- 38 Rebecca Dzombak, Meet a scientist tracking cactus poaching in the Atacama Desert, ScienceNews, 5 December 2024, <https://www.sciencenews.org/article/cactus-poaching-desert-pablo-guerrero>.
- 39 South African Anti-Money Laundering Integrated Task Force (SAMLIT), Financial flows associated with illegal wildlife trade in South Africa: An updated perspective, December 2023, <https://www.fic.gov.za/wp-content/uploads/2023/12/Financial-flows-associated-with-illegal-wildlife-trade-in-South-Africa.pdf>.
- 40 Esmeralda Strauss, Leevi Nanyeni and Theunis Pietersen, Plant poaching receives more attention in Namibia's fight against wildlife crime, Conservation Namibia, 30 October 2024, <https://conservationnamibia.com/articles/plant-poaching-2024.php>.
- 41 South African Anti-Money Laundering Integrated Task Force, Financial flows associated with illegal wildlife trade in South Africa: An updated perspective, December 2023, <https://www.fic.gov.za/wp-content/uploads/2023/12/Financial-flows-associated-with-illegal-wildlife-trade-in-South-Africa.pdf>.
- 42 Navin Singh Khadka, Rare plants hidden in toys – and other trafficking tactics, BBC, 4 July 2024, <https://www.bbc.com/news/articles/cd19x4qpw5qo>.
- 43 Jenny Kleeman, The £500 succulent and the pot plant traffickers making a fortune, *The Times*, 6 December 2024, <https://www.thetimes.com/life-style/wildlife-nature/article/illegal-trade-succulents-plant-police-82lg3tmwq>.
- 44 Adam Welz, Unnatural surveillance: How online data is putting species at risk, *Yale Environment 360*, 6 September 2017, <https://e360.yale.edu/features/unnatural-surveillance-how-online-data-is-putting-species-at-risk>.
- 45 SAMLIT, Financial flows associated with illegal wildlife trade in South Africa: An updated perspective, December 2023, <https://www.fic.gov.za/wp-content/uploads/2023/12/Financial-flows-associated-with-illegal-wildlife-trade-in-South-Africa.pdf>.
- 46 Adam Welz, Unnatural surveillance: How online data is putting species at risk, *Yale Environment 360*, 6 September 2017, <https://e360.yale.edu/features/unnatural-surveillance-how-online-data-is-putting-species-at-risk>.
- 47 SAMLIT, Financial flows associated with illegal wildlife trade in South Africa: An updated perspective, December 2023, <https://www.fic.gov.za/wp-content/uploads/2023/12/Financial-flows-associated-with-illegal-wildlife-trade-in-South-Africa.pdf>.
- 48 SANBI et al, National response strategy and action plan to address the illegal trade in South African succulent flora,

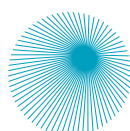
- February 2022, <https://www.sanbi.org/wp-content/uploads/2022/08/Succulent-strategy-and-action-plan.pdf>.
- 49 Government of South Africa, National Integrated Strategy to Combat Wildlife Trafficking, February 2017, <https://static.pmg.org.za/170530NISCWT.pdf>.
- 50 Carina Bruwer, Protecting South Africa's precious succulents from illegal traders, ENACT, 29 November 2023, <https://enactafrica.org/enact-observer/protecting-south-africa-s-precious-succulents-from-illegal-traders>.
- 51 SAMLIT, Financial flows associated with illegal wildlife trade in South Africa: An updated perspective, December 2023, <https://www.fic.gov.za/wp-content/uploads/2023/12/Financial-flows-associated-with-illegal-wildlife-trade-in-South-Africa.pdf>.
- 52 Chevon Booysen, Endangered-plants poacher behind bars for a decade, *Cape Times*, 16 November 2023, <https://www.iol.co.za/capetimes/news/endangered-plants-poacher-behind-bars-for-a-decade-9fbb4f20-bccb-4dae-b512-5e8cb87d4fd6>.
- 53 Esmeralda Strauss, Leevi Nanyeni and Theunis Pietersen, Plant poaching receives more attention in Namibia's fight against wildlife crime, Conservation Namibia, 30 October 2024, <https://conservationnamibia.com/articles/plant-poaching-2024.php>.
- 54 TRAFFIC, Joint conservation and e-commerce action to urgently combat illegal plant trade, 4 September 2024, <https://www.traffic.org/news/joint-conservation-and-e-commerce-action-to-urgently-combat-illegal-plant-trade>.
- 55 Monitoring of the Andes Amazon Program (MAAP), MAAP #90: Using drones to monitor deforestation and illegal logging, 13 August 2018, <https://www.maaprogram.org/drones-eng>; MAAP #139: Using satellites to detect illegal logging in Peruvian Amazon, 2 July 2021, https://www.maaprogram.org/peru_logging.
- 56 SANBI et al, National response strategy and action plan to address the illegal trade in South African succulent flora, February 2022, <https://www.sanbi.org/wp-content/uploads/2022/08/Succulent-strategy-and-action-plan.pdf>.



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