Wildlife Justice Commission

EXECUTIVE SUMMARY

Disruption and Disarray: An analysis of pangolin scale and ivory trafficking, 2015-2024

April 2025

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Executive Summary

In 2019, pangolin scales and ivory were being trafficked from Africa to Asia in extraordinary quantities. Two record-breaking pangolin scale shipments were seized just days apart in Singapore totaling more than 25 metric tons,[1] while three record-breaking ivory seizures were made in Vietnam, Singapore and China also amounting to more than 25 metric tons.[2] Rapid growth in the average shipment size pointed to the involvement of organized crime networks operating at an industrial scale, due to the significant financial capital, business infrastructure and corrupt connections required to move large shipments across continents with such frequency. Then in 2020, triggered by the global shock of the COVID-19 pandemic, pangolin scale and ivory seizures plummeted and have remained comparatively low in the years since.

The disruption was sudden and remarkably, it appears to be holding. In addition to the effects of the pandemic, recent intelligence suggests that important law enforcement efforts, fluctuations in price dynamics and changing market demands could be contributing to a substantial reduction in the illegal trade of both pangolin scales and ivory compared to the pre-COVID years.

This report presents an updated analysis of ivory and pangolin scale trafficking trends over the past decade, comparing the pre-pandemic period from 2015-2019 with the post-pandemic period from 2020-2024. It is based on reported seizure data, open-source research, and criminal intelligence and investigation findings from the Wildlife Justice Commission (WJC).

"The disruption was sudden and remarkably, it appears to be holding."

1. 12.9 metric tons of pangolin scales seized on 3 April 2019 and 12.7 metric tons of pangolin scales seized on 8 April 2019.
2. 9.12 metric tons of ivory seized in Vietnam on 26 March 2019, 8.8 metric tons of ivory seized in Singapore on 21 July 2019, and 7.48 metric tons of ivory seized in China on 30 March 2019.

Summary of key findings

Analysis period	2015 TO 2024
Pre-pandemic period	2015 TO 2019
Post-pandemic period	2020 TO 2024
Number of seizure incidents analyzed	2,201
Target commodities	Pangolin scales and elephant ivory tusks or pieces
Seizure locations	Across the globe
Types of seizures analyzed	Significant seizures, specifically multi-ton and large-scale seizures

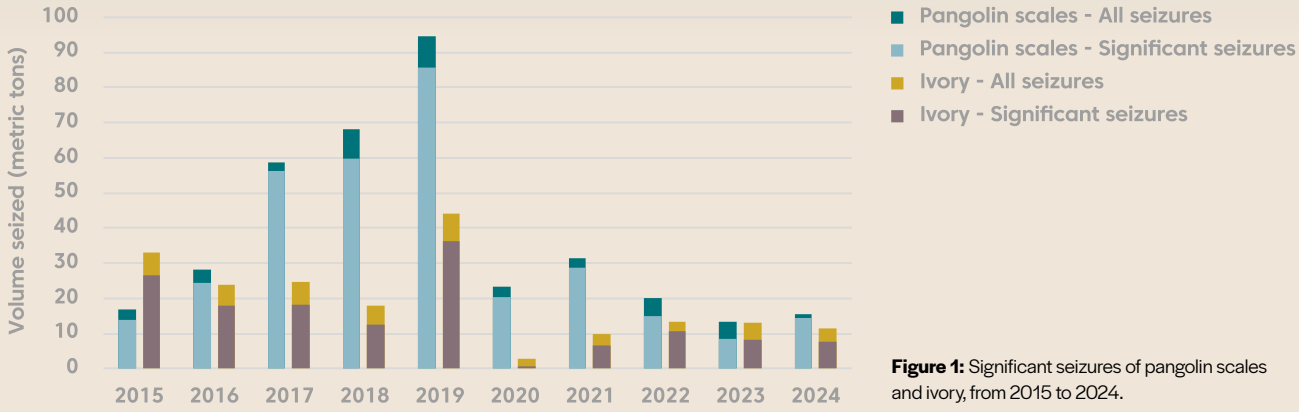

Figure 1: Significant seizures of pangolin scales and ivory, from 2015 to 2024.

- **A small number of significant seizures[3] comprised the majority of the volume of scales and tusks seized,** which is a strong indicator of the involvement of organized crime networks in the supply chains of these products due to the extensive resources needed to procure and move large-scale shipments.

- Since the disruption of the pandemic, there has been **a substantial decrease in the number of multi-ton seizures** and a **subsidence of the trend for combined shipments of both pangolin scales and ivory.** While this could point to organized crime networks getting better at evading detection, fewer large consignments could also indicate a lower risk appetite for criminal networks to bear the financial losses caused in the event of law enforcement interception.

- **An increased proportion of multi-ton seizures are occurring in Africa prior to export,** which could point to a greater proactive law enforcement response in African hotspots.

- **No significant pangolin scale seizures have been reported at any seaport globally for three years[4] or airport for more than five years.[5]** The relative absence of pangolin scale seizures at the demand side of the supply chain could suggest a diminished capacity of organized crime networks to move their goods out of Africa.

- While a **shift appears to be emerging from Nigeria to other African countries for sending ivory shipments to Asia,** persistent stockpile seizures in Nigeria suggest that it **continues to be a key export hub for pangolin scale shipments.**

- **Criminal networks appear to adopt a fluid approach to commodity choice,** diversifying their investments to take advantage of high demand and rising market prices of either product. The flexibility of networks to adapt to changes in the market and deal interchangeably with pangolin scales and ivory highlights the importance of targeting the criminal networks, rather than the product, to address this problem.

- **Pangolin scale values have declined and stabilized** at lower levels at both the supply and demand ends of the supply chain. **Ivory values declined by around 50%** across the supply chain in the pre-pandemic period, **then were relatively stable in Africa in the post-pandemic period.** Steady product prices alongside the ongoing but lower levels of product seizures could point to continued existence of market demand for both commodities.

3. The analysis in this report drills down on "significant seizures" as a subset of the pangolin scale and ivory seizure data. These are characterized as large-scale seizures that can be attributed to high-level suppliers and senior buyers acting on behalf of criminal networks, and they therefore contribute to the intelligence picture of the criminal dynamics of the major networks. Significant seizures are further defined in the Methodology section of this report.

4. A shipment of 6.2 metric tons of pangolin scales and 456 kg of ivory was seized at Tien Sa Port in Da Nang, Vietnam in January 2022: https://en.vietnamplus.vn/six-tonnes-of-ivory-and-pangolin-scales-seized-at-tien-sa-port-post220730.vnp

5. A shipment of 1,530 kg of pangolin scales was seized at Port Harcourt International Airport in Nigeria, reported in October 2019. The shipment was destined for China. Refer to: https://guardian.ng/NEWS/CUSTOMS-SEIZES-N826M-PANGOLIN-SCALES-TOMATO-PASTE-OTHERS-IN-PORT-HARCOURT/

Conclusions

The impact of the COVID-19 pandemic on the trafficking of pangolin scales and ivory from Africa to Asia cannot be overstated. It wreaked havoc on the transcontinental wildlife supply chains and upended the unsustainable trajectory of the trafficking of these commodities. Although the pandemic generated the initial shock, it is surmised that strengthened and targeted law enforcement efforts may have also contributed to fundamental change in the global wildlife crime landscape. The current intelligence picture suggests a major reduction in the trafficking of both commodities, which appears to have stabilized at relatively low levels compared to the pre-pandemic period.

However, intelligence gaps remain on the extent to which pangolin scale and ivory shipments are successfully entering supply chains in Asia, despite the apparent slowing down of seizures. Key questions include whether shipments are no longer being detected due to the use of more sophisticated concealment methodologies or changed modus operandi, or whether networks have procured better corruption settings at the receiver ports to facilitate more secure importation of goods. Limited data on pangolin population levels also means the possibility of a scarcity of product contributing to the drop in transnational trade cannot be ruled out, although the ongoing large stockpile seizures in Africa and steady pricing trends suggest this is unlikely to be the case just yet.

While the root causes of the disruption in the trafficking landscape are likely varied and complex, investigation findings indicate that proactive law enforcement efforts targeting the primary criminal networks in African hotspots with arrests and prosecutions are having an important impact. Intelligence from WJC investigations has found that fear and breakdown in trust among the networks at the supply side is resulting in an increased perception of risk and a stalemate scenario between wholesale suppliers, Asian buyers, and brokers that is thwarting their ability to do business.

Law enforcement results achieved by Chinese and Nigerian authorities have had a highly disruptive impact on the criminal landscape in a relatively short period of time, underlining the effectiveness of a consistent and targeted criminal justice approach. Several good practices and policy recommendations can be identified that should be adopted by other key countries along the supply chain to expand and sustain the current disruptive impact and reduce the risk of crime displacement to other locations.

Good practices and policy recommendations

- **A top-tier targeting strategy** to map the criminal networks and identify and target the crime bosses, financiers, and high-value linchpins who play a crucial role in the network's activities.

- **In-depth and long-term investigations** for effective penetration of the networks, to corroborate intelligence and collect robust evidence of their criminal activities.

- Use of an array of **intelligence analysis and special investigative techniques** to assemble the details of large, complex cases and build an irrefutable brief of evidence for prosecution. Such techniques include, for example, undercover investigations, covert surveillance, lifestyle analysis, and financial intelligence analysis.

- **Conducting further investigation after seizures** to identify, arrest and prosecute those responsible for supplying the product and organizing shipments. Asset forfeiture is also a powerful tool to deprive perpetrators of the proceeds of crime, as has been applied by China against high-level traffickers.

- **Involving prosecutors early in the investigation** to ensure evidence is collected lawfully and is admissible in court. Engagement with prosecutors can help shape investigative strategies so they are geared towards evidence collection.

- **International cooperation** including intelligence sharing and joint investigations with other countries connected to the criminal networks, to tackle crimes holistically across the supply chain. This can lead to further arrests and prosecutions and amplify disruption within the broader network.

- **Public-private partnerships** between law enforcement agencies and the private sector (including civil society organizations, financial institutions, the transport sector, and academia) can provide valuable technical assistance and capacity building support to assist with investigating transnational wildlife crime networks.

- **Better utilization of UNTOC tools and increased prioritization of wildlife crime** are key to ensure these crimes are tackled in an effective and enduring manner. Of most pertinence are the provisions for special investigative techniques, international cooperation, joint investigations, confiscation and seizure of proceeds of crime, and mutual legal assistance.

Law enforcement and legal experts fighting transnational organised wildlife crime.

Wildlife Justice Commission

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