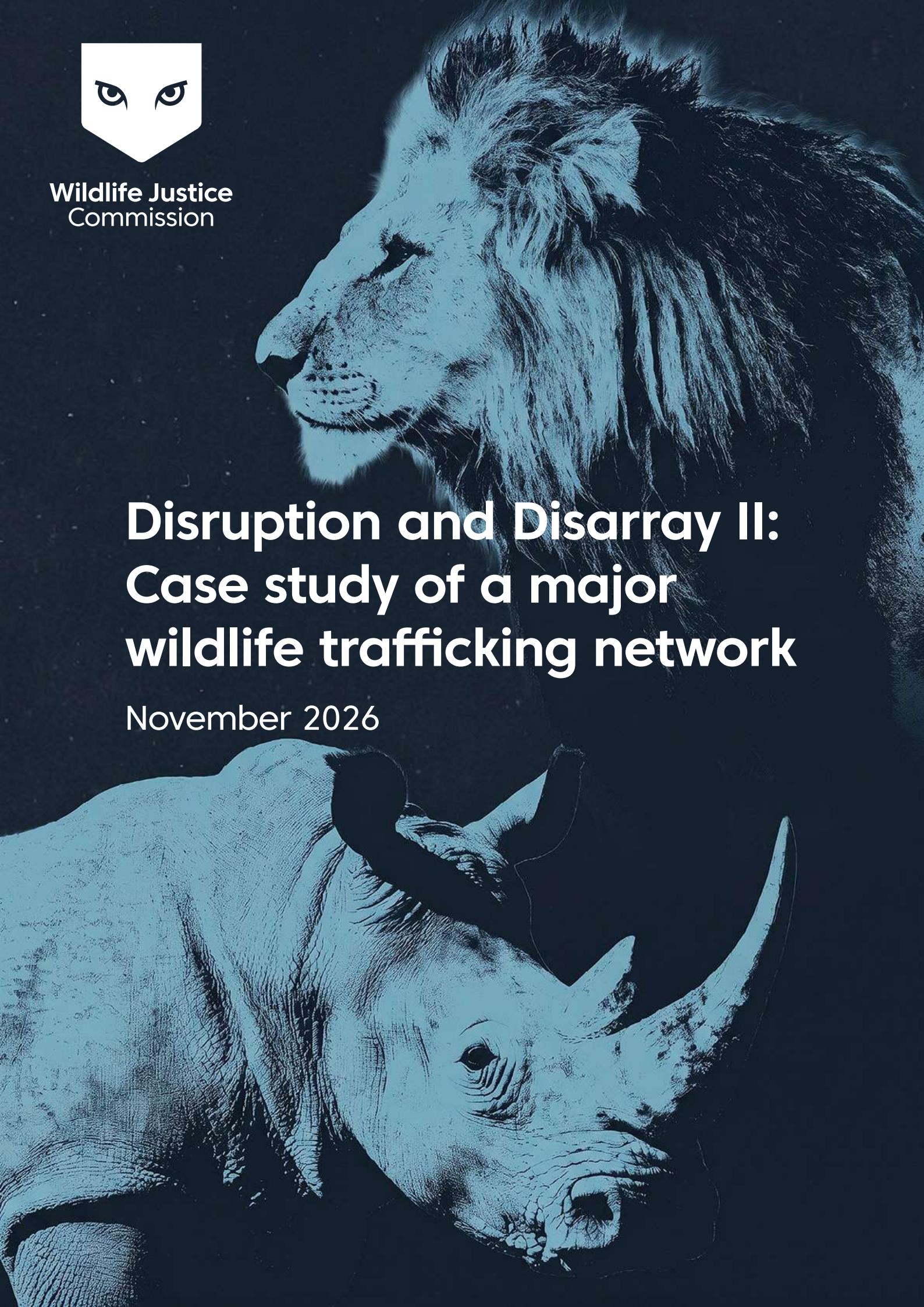
Wildlife Justice Commission



Disruption and Disarray II: Case study of a major wildlife trafficking network

November 2026

RECOMMENDED CITATION

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Acronyms

CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
KYC	Know Your Customer
UNODC	United Nations Office on Drugs and Crime
USD	United States Dollar
WJC	Wildlife Justice Commission

1. Executive summary

In 2022, the arrests of a crime boss, two of his lieutenants, and a senior broker marked a watershed moment in disrupting transnational wildlife trafficking. All four suspects were successfully prosecuted for wildlife crimes in a precedent-setting case that demonstrates the power of intelligence-led investigations and cross-border law enforcement cooperation.

These results stemmed from a multi-year investigation into this criminal network conducted by the Wildlife Justice Commission (WJC) in partnership with law enforcement agencies in two countries. The investigation exposed and eventually disrupted one of the more sophisticated wildlife trafficking groups operating between Africa and Asia, which evidence showed had smuggled rhino horn, pangolin scales, elephant ivory, and lion and tiger bone products through established trafficking routes for many years. The network was extensive, highly mobile, and financially resilient, operating across multiple countries and capable of withstanding the seizure of large, high-value wildlife consignments.

> "It is better to fix the leaky faucet than to continuously mop the floor."
>
> — Senior law enforcement officer, Asia

This report presents a sanitised summary of key findings from the investigation. The report examines the inner workings of the trafficking network and its financial flows, including financial red flags that can help financial institutions identify suspicious financial activity linked to wildlife trafficking. It is intended to help inform law enforcement officers and practitioners, financial institutions, policymakers, researchers, and others involved in addressing wildlife trafficking and related illicit financial flows. All names and identifying details have been withheld to protect the integrity of ongoing investigations connected to this case.

Scale and scope of the network

Evidence gathered during the investigation and intelligence obtained from the analysis of phones seized during the arrests of key suspects provided unprecedented insight into the network's transnational operations, including its use of cryptocurrency.

It is estimated that between 2018 and 2022, the criminal network invested at least USD 1.26 million at wholesale costs to acquire more than 17 tonnes of wildlife products, representing over 40 rhinos, up to 77,000 pangolins, more than 160 elephants, and 120 lions. These products were estimated to have a potential value of around USD 8.7 million in Asian wholesale markets.



These figures represent only traceable seizures and shipments; given the principal's suspected decade-long involvement in wildlife trafficking, the actual amounts are likely to be significantly higher.

The network was also believed to have weathered more than USD 900,000 in direct financial losses due to shipments seized by law enforcement authorities around the world. When accounting for the potential value of these products at wholesale markets in Asia, the prospective financial losses represented by these seizures could have reached approximately USD 6.97 million. The network's ability to absorb such losses is an indication of its resilience.

Findings from the investigation suggest that the criminal network concealed its trafficking activities under the cover of legitimate and shell companies, used cryptocurrency as a payment method, and operated cooperatively with other criminal networks to co-invest in the purchase and shipment of large quantities of wildlife products. These strategies positioned it as one of the most professionalised wildlife trafficking networks WJC has uncovered to date.

Operational impact

The investigation required sophisticated intelligence analysis, undercover operations, surveillance, and digital forensics. Its success hinged on trust, collaboration, and information sharing, as the enforcement outcomes would not have been possible without the tenacity, professionalism, and commitment of WJC's law enforcement partners.

The high-level disruption of this criminal network has contributed to measurable, global impacts on key wildlife trafficking routes. Analysis of seizure data suggests significant reductions in pangolin scale and ivory shipments from Africa, which appear to be sustained since the initial global shock triggered by the COVID-19 pandemic.[1] Strengthened law enforcement responses in African trafficking hotspots have played an important role, with intelligence suggesting authorities are steadily eroding the capacity of criminal networks to move their goods out of Africa. The collapse of the criminal network featured in this case study is connected to increased law enforcement pressure in Africa. As summarised by one senior law enforcement officer in Asia, "It is better to fix the leaky faucet than to continuously mop the floor."

Lessons learned

The investigation proves that well-resourced, intelligence-driven operations can successfully disrupt major trafficking networks and secure meaningful convictions. This case provides a blueprint for a proactive law enforcement approach targeting the top tiers of transnational organised wildlife crime, and offers vital lessons to inform future investigations, including:

- The importance of strategically targeting high-value individuals at the top of the network, to maximise law enforcement impact and disruption.
- International cooperation, including intelligence sharing and joint investigations, is essential to combat transnational networks. Multistakeholder partnerships are especially important in facilitating collaboration.
- The benefits of conducting further investigation after a seizure to identify new lines of inquiry and the importance of using special investigative techniques such as undercover investigation and covert surveillance to reach the top-level members of the criminal network. In addition, gathering digital evidence through phone data analysis not only supports the prosecution of the primary offence but can also yield intelligence to fuel further investigations.
- Financial investigation is a powerful tool that should be applied in parallel to investigations into the primary wildlife offences in major trafficking cases. Tracing payment methods can expose key individuals and hidden connections and open the door to asset forfeiture and money laundering charges. In this case, financial evidence underpinned money laundering charges against the senior broker, though the missed opportunity to pursue asset seizure and money laundering charges against the principal underscores the need to fully leverage financial

1 WJC (2025), Disruption and Disarray: An analysis of pangolin scale and ivory trafficking, 2015-2024.

investigation, not just as supporting evidence, but as a basis for independent charges and confiscation. The network's use of cryptocurrency also points to a potential opportunity: transactions through regulated exchanges can be traced more easily than cash, offering law enforcement new avenues for detection and disruption, provided the necessary tracing expertise is developed.

This case sets a benchmark for future enforcement efforts and demonstrates that with effective coordination, evidence gathering, and prosecutorial follow-through, even entrenched transnational criminal networks can be brought to justice. Building on this foundation is essential to prevent the continued decimation of endangered species by wildlife traffickers and preserve biodiversity for future generations.



Investigation outcomes

RESULTS

4 high-level traffickers arrested

Convicted and sentenced:
- 1 principal
- 2 lieutenants
- 1 senior broker

Law enforcement agencies in at least 4 countries made seizures

Generated an unprecedented intelligence picture

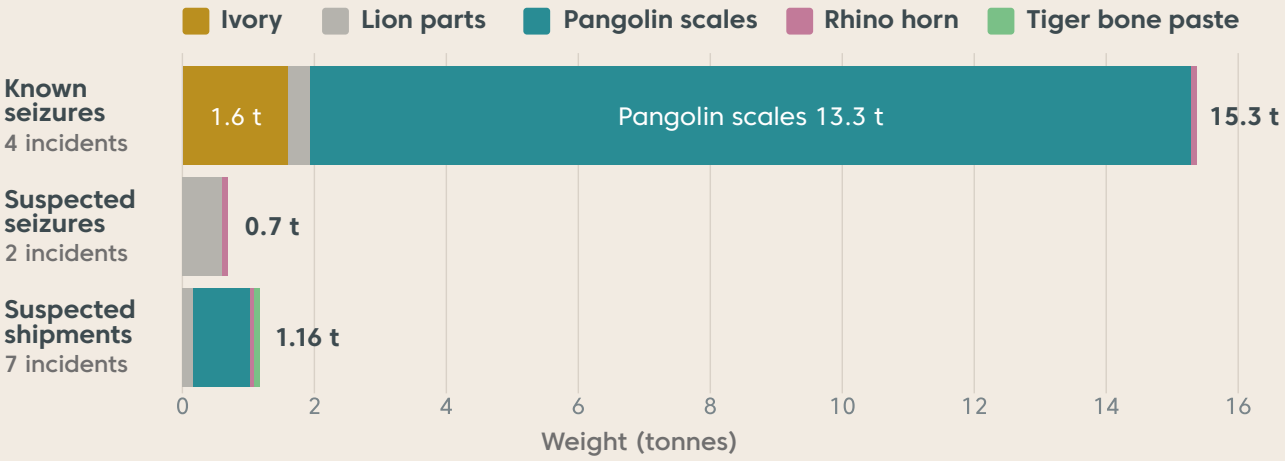
SHIPMENTS & SEIZURES

Network linked to at least 13 incidents:
- 6 seizures (known and suspected)
- 7 shipments (suspected)

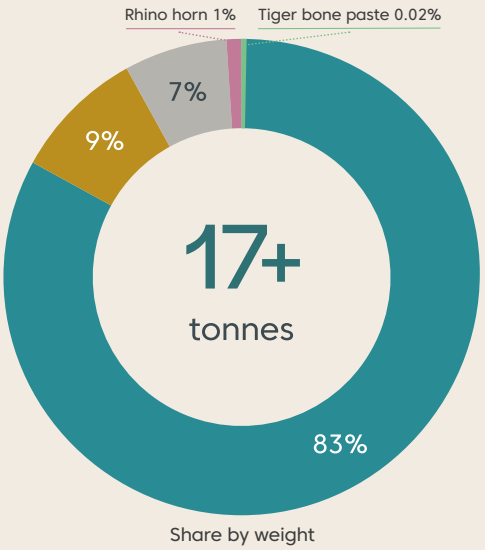
At least USD 1.26 million (wholesale costs) estimated investment in wildlife products

Estimated financial losses:
- USD 752,000 in 4 known seizures
- USD 148,000 in 2 suspected seizures

Known and suspected wildlife seizures and shipments linked to the criminal network, 2018-2022



WILDLIFE PRODUCTS



Estimated access to over 17 tonnes of wildlife products

Pangolin scales
14.2 tonnes · up to 77,000 pangolins

Elephant ivory
1.6 tonnes · over 160 elephants

Lion bones
1.1 tonnes · over 120 lions

Rhino horn
180 kg · over 40 rhinos

Tiger bone paste
3 kg · at least 1 tiger

Figure 1. Key outcomes of the investigation.

2. Introduction to the investigation

The investigation began as two separate operations: one targeting rhino horn traffickers in southern Africa, and another targeting pangolin scale and ivory traffickers in West Africa. These parallel investigations converged in 2021 when an analysis of a major seizure of pangolin scales and ivory in West Africa revealed connections to a criminal network WJC was already tracking in southern Africa. This breakthrough connected regional law enforcement efforts, enabling a coordinated response to a global trafficking network.



The investigation exposed one of the more sophisticated wildlife trafficking groups operating between Africa and Asia, which evidence showed had for many years smuggled rhino horn, pangolin scales, elephant ivory, and lion and tiger bone products through established trafficking routes. The network was extensive, highly mobile, and financially resilient, operating across multiple countries and capable of withstanding the seizure of large, high-value wildlife consignments.

In 2022, the investigation culminated in the arrests in two countries of four high-level traffickers who were operating at the top of this network, including the principal (level-5 trafficker), two lieutenants (level-4 traffickers), and a senior broker (level-4 trafficker).[2] By 2024, all four traffickers had been successfully prosecuted, convicted, and sentenced, marking a watershed moment in disrupting transnational wildlife crime.

Overall, law enforcement authorities in at least four countries played crucial roles in disrupting this criminal network, with four known wildlife seizures involving a combined total of 13,337 kg of pangolin scales, 4.6 kg of pangolin claws, 1,606.14 kg of ivory, 55.87 kg of rhino horn, and 340 kg of lion bones.[3] Intelligence also identified an additional two suspected seizures that may have been linked to the network, involving an estimated 53.97 kg of rhino horn and 600 kg of lion bones.[4]

Evidence gathered during the investigation plus intelligence obtained from the analysis of phones seized

2 Refer to the Methodology section in the Appendix for a description of WJC's five threat level categories. Level 5 represents the highest level.
3 The four known wildlife seizures were estimated to represent 13 rhinos, up to 72,000 pangolins, more than 160 elephants, and 38 lions.
4 The two suspected wildlife seizures were estimated to represent 12 rhinos and 66 lions.

during the traffickers' arrests provided unprecedented insight into the network's transnational operations. The phone records revealed years' worth of intelligence on their wildlife trafficking operations, including other traffickers they worked with, business ledgers, payment systems, and valuable modus operandi details. It enabled analysts to comprehensively map the criminal enterprise with a remarkable depth of detail, including upline suppliers and shipping enablers. All actionable intelligence on identified suspects was shared with law enforcement partners in the countries in which criminal activities were occurring, triggering multiple follow-up investigations into other key network members and criminal associates.

These were groundbreaking results, and the network's collapse was both a law enforcement milestone and a model of effective international collaboration. It showcased how intelligence-led investigations, strong partnerships, and digital forensics can disrupt high-level trafficking operations. Just as importantly, the intelligence gleaned from this case continues to drive new arrests and seizures across Africa and Asia, linking back to this network's associates and other affiliated criminal networks.

This report presents a sanitised summary of the main findings of the investigation. All names and identifying details have been withheld to protect the integrity of ongoing investigations connected to this case. The story of this investigation illustrates key aspects of the criminal dynamics and inner workings of the network. It is intended to help inform law enforcement officers and practitioners, financial institutions, policymakers, researchers, and others involved in addressing wildlife trafficking and related illicit financial flows. It also recognises the invaluable efforts of law enforcement partners in bringing key members of the criminal network to justice.

This is the second in a trilogy of WJC reports examining different aspects of the global pangolin scale and ivory trafficking landscape. The first report in the series, *Disruption and Disarray: An analysis of pangolin scale and ivory trafficking, 2015-2024*, was published in April 2025 and examined global trafficking trends over a 10-year period. Complementing that earlier report, this account takes a deep dive into the modus operandi of a specific major transnational criminal network that operated during much of the same time period and exemplifies many of the trafficking trends seen at the global level.



3. Inner workings of the network

Network structure

The criminal network was hierarchical at its core, with a global reach enabled by connections to collaborators located around the world (see Figure 3, overleaf).

At the top were two principals: one who directed the day-to-day operations, maintaining oversight of finances, logistics, and procurement, plus a co-principal who financed much of the network's activities. Under their leadership, a small, tightly controlled inner core of lieutenants managed the procurement of products, consolidation, storage, transport logistics, and coordination with brokers and other vendors. Some lieutenants were based in key African countries, while others travelled to Africa from Asia for extended periods to oversee shipments or negotiate transactions.

Beyond this core, the network relied on a fluid ecosystem of local associates across Africa and Asia. These included brokers, transporters, money handlers, foot soldiers, and logistics contacts at various stages of the supply chain. Their relationships were informal and shifted according to opportunity, risk, and the business activities of the network.

This combination of a disciplined core group and a flexible support network gave the criminal network both resilience and reach. It could source wildlife products from multiple countries, adjust trafficking routes in response to law enforcement pressure, and maintain a steady supply of rhino horn, pangolin scales, ivory, and other protected species to buyers in Asia (Figure 2).

Characteristics of the criminal network

- Hierarchical structure
- Transnational
- Vast financial backing and resilience
- Use of sophisticated trafficking and money laundering methodologies
- Expansive access to high-level corrupt enablers
- Fluid, flexible, opportunistic and ubiquitous in their approach to commodity choice

Figure 2. Characteristics of the criminal network.

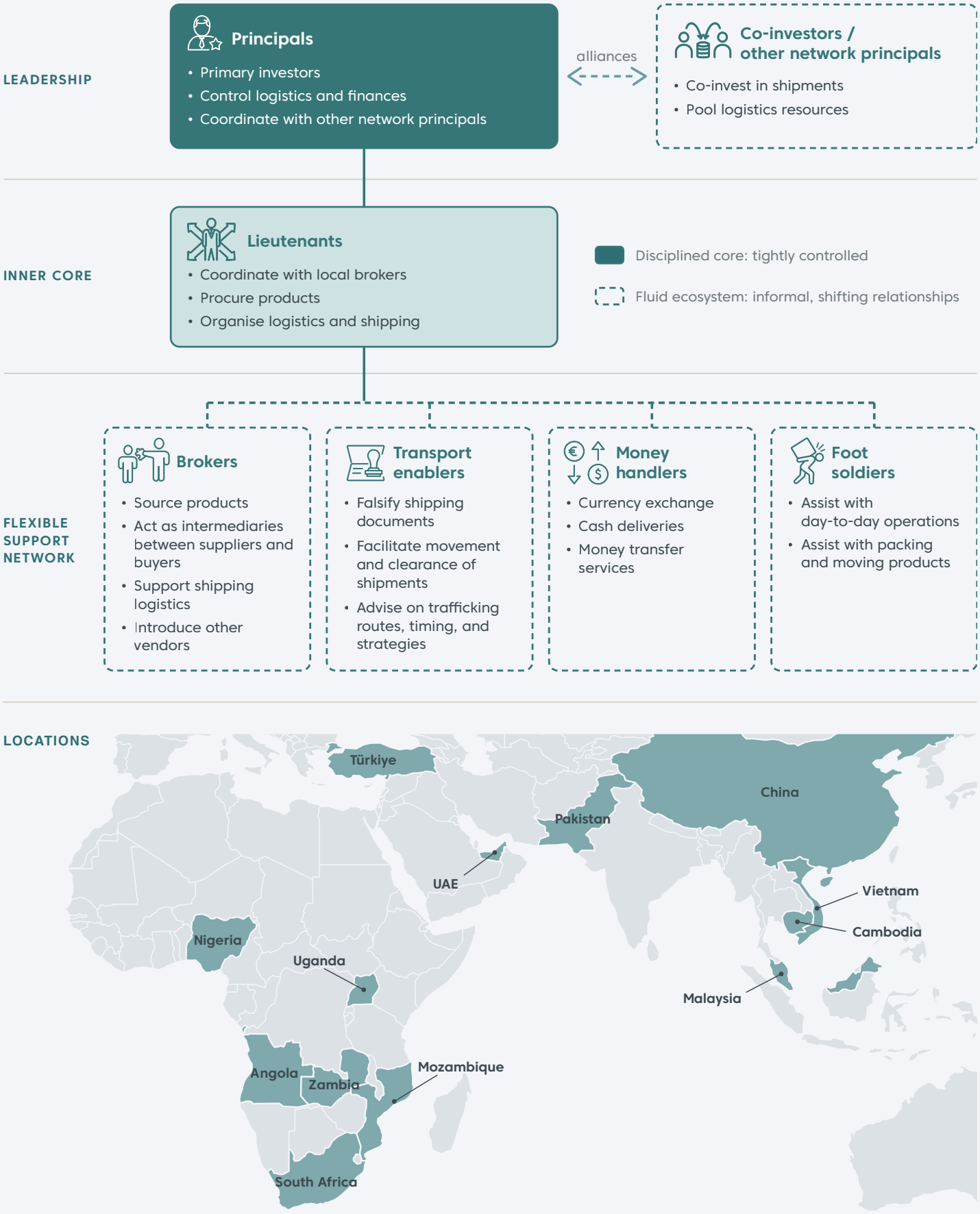


Figure 3. The hierarchy of the criminal network, key roles and responsibilities, and their locations in Africa and Asia.

Product sourcing

The criminal network dealt in all the major wildlife products—rhino horn, pangolin scales, ivory, and lion and tiger products—which were procured in various countries in Africa and trafficked via air or sea routes to Asia. Maintaining multiple supply chains enabled the network to diversify its product flows, hedge against law enforcement disruption in any one country, and ensure a continual supply into Asia.

RHINO HORN

The criminal network maintained longstanding relationships with several rhino horn suppliers in southern Africa and is believed to have smuggled large rhino horn consignments on a frequent basis. Between 2018 and 2022, the network is suspected of smuggling or attempting to smuggle at least 180 kg and as much as 430 kg of rhino horn from Africa to Asia.

Intelligence suggests that most suppliers considered it too risky to stockpile rhino horn, so once they had sourced the horn it would be sold quickly. The criminal network's rhino horn suppliers were able to deliver horns within a matter of hours, depending on where the horn was located and the network's shipping requirements. Horns were often transported overland using vehicles with hidden compartments (Images 1-2). Intelligence also indicates that the network was selective with the rhino horns they purchased. They did not buy all horns offered by their suppliers, particularly when it came to rear horns, which could denote a general preference for front horns.





Images 1–2. The hidden compartment in the senior broker's vehicle that was used to conceal rhino horn. **Credit:** Wildlife Justice Commission.

"What about ratio between big and small scales?"

"Or we only take big scales?"

"Like before, 70[%] is big."

JUNE 2019

"If go with ivory, it's easy to get stolen, uncontrollable."

APRIL 2022

PANGOLIN SCALES

Intelligence indicates that from around 2018, the network principal cultivated a business relationship with a major wildlife broker in West Africa to increase the network's pangolin scale procurement. Pangolin scales were sourced in vast quantities, as evidenced by two seizures totalling 13.337 tonnes that the group was eventually prosecuted for, as well as intelligence pointing to their potential involvement in a further 19.4 tonnes of pangolin scale shipments and seizures. Pangolin scales were often purchased in mixed batches of "big" and "small" scales. Although big scales were usually more expensive, the network often purchased a 70%-30% mix of big and small scales, which could imply a preference for big scales.

ELEPHANT IVORY

Ivory was procured from the same brokers in West Africa who were also supplying pangolin scales. The criminal network appeared to deal only in relatively small quantities of ivory, as they viewed it as a riskier product that was more vulnerable to law enforcement detection and seizure. Three seizures they were prosecuted for involved a total of 1.6 tonnes of ivory.

"My guys are coming to your place for cooking and will stay there one week?? Can you inform your people!"

APRIL 2021

LION AND TIGER PRODUCTS

Although it was not initially apparent during WJC's investigation, intelligence indicates that lion and tiger bones were one of the criminal network's major product lines. Between 2018 and 2022, the network is suspected to have smuggled or attempted to smuggle at least 1.1 tonnes of lion and/or tiger bones and 3 kg of tiger bone paste from Africa to Asia (Image 3).[5] Other intelligence suggests further shipments may have occurred, potentially involving six tonnes of bones and 100 kg of tiger bone paste.[6]



Image 3. Tiger bone paste wrapped in plastic wrap. **Credit:** Wildlife Justice Commission.

5 These quantities of products are estimated to represent over 120 lions and at least one tiger.

6 This quantity of bones is estimated to represent up to 666 lions, and 100 kg of tiger bone paste could represent up to 33 tigers.

WJC's intelligence indicates the network would at times bring in a specialist cook to process the bone paste in Africa so the finished product could be exported. This likely provided the benefits of lower transportation costs compared to large, bulky shipments of bones, and a lower risk of law enforcement detection due to bone paste being a less recognisable product. Intelligence also points to awareness of this criminal activity by some of the local lion and tiger suppliers, as the network would use their facilities to carry out the cooking process.

Cooking the bone paste is a lengthy and labour-intensive process that involves boiling the bones down over many days to form a thick paste. The paste is then dried until it forms a solid block. Intelligence from WJC investigations suggests that bone paste is one of the most lucrative and sought-after products from tigers and lions in the illegal wildlife trade.

Trafficking routes and transportation methods

The criminal network used varied and opportunistic trafficking routes that obscured the origin of shipments by using strategic transit points before entry into Asia. Different trafficking routes and transportation methods were used for different products, and when one route was compromised by law enforcement detection, alternative routes would be developed to sustain the trafficking network.

Intelligence suggests the principal maintained an extensive set of contacts along all stages of the supply chain who could help facilitate the network's shipments. It is suspected that trafficking routes were chosen based on which connections the network could access at the time of sending a shipment, but that the reliability of these connections could vary significantly. The intelligence indicates that these contact points provided updates on the status of trafficking routes and seizures, while the principal also maintained an awareness of wildlife seizures reported in the media. Based on this information, the principal kept abreast of trends and advised his lieutenants on preferred routes, packing, and transportation methods to use for their shipments.

RHINO HORN

Rhino horn was generally smuggled by air transportation, either in passenger luggage carried by hired couriers (or "mules") or packed in cartons or packages that were sent via air freight. In their interactions with WJC's undercover operatives, members of the criminal network indicated that when using mules, they would package the horns in suitcases and deliver them to the airport just prior to departure. It is suspected that the network used trusted insiders at the airport to facilitate the movement of the mules and their baggage through airport checkpoints. Although trafficking routes shifted, evidence indicates rhino horn shipments generally originated from locations in southern Africa and preferred transit points included Istanbul, Türkiye; Kuala Lumpur, Malaysia; Doha, Qatar; and Dubai, United Arab Emirates.

"Doha – Seoul then Cambodia is better."
DECEMBER 2018

"Malaysia not ok to go."
JANUARY 2019

"Please help me to check which one of these 4 ways to send scales from Lagos is the best: Dubai – Doha – air France – Turkish."
FEBRUARY 2019

"Pemba-Tanzania-Dubai-Ha Noi"
"Let me ask, many people got caught already."
JANUARY 2019

"Can't pick up at Laos"
"Its ok to transport to Cambodia."
SEPTEMBER 2019

PANGOLIN SCALES AND IVORY

Pangolin scales and ivory were smuggled from West Africa to Asia either by air freight or container ship. Intelligence obtained during the investigation suggests that air freight was the preferred transport method for pangolin scales up to 2019, but as the network moved towards trafficking larger consignments of products, they increasingly relied on sea transportation methods.

> "Search for a good agent so that we can do contener to move more goods."
>
> **JULY 2019**

For example, in 2019, the intelligence points to the network working with a major broker to send 18 tonnes of pangolin scales by air freight to multiple countries in Asia in weekly batches of 500 kg over a three-month period. However, in July 2019, the broker advised the principal to find a shipping agent so they could move larger quantities of product by shipping container. With shipping, 40-foot containers appeared to be the network's preferred choice to maximise profits, as they could carry the largest quantities of products.

LION AND TIGER PRODUCTS

Intelligence suggests that the criminal network shipped lion and/or tiger bones from Africa to Asia by sea in multi-tonne quantities. WJC's investigation identified at least one major lion bone seizure that was sent by container ship as well as other potential shipments, including six tonnes of lion bones that may have been shipped in March 2021.

> "Hey bro, we will pack around 22 individuals. 02 individuals/ big box size 1.1m height. [Redacted] will handle packing."
>
> **DECEMBER 2020**

Smaller consignments of lion and/or tiger bones were suspected to be packed in cartons and sent by air freight. Intelligence also points to processed blocks of bone paste being sent from Africa to Asia by FedEx, up to several kilograms at a time. WJC obtained intelligence that at least 3 kg of tiger bone paste was successfully smuggled this way in January 2021.

Concealment methods

Using other commodities to conceal their illicit shipments was essential to the network's use of sea transportation. Intelligence obtained during the investigation indicates that the criminal network would move six to eight tonnes of pangolin scales, ivory, or a combination of both, packed in polypropylene bags in volumes of around 70-80 kg per bag. These were then hidden amongst 18-20 tonnes of a lawful (or "cover load") commodity in a 40-foot shipping container.

Cover load selection was influenced by price, availability, resale prospects, and the perception of vulnerability to search by customs authorities. For example, frozen goods and perishables were perceived to be less likely to be searched or delayed at customs clearance. Seeds and nuts were believed to help conceal pangolin scales from detection during X-ray screening due to similarities in product appearance. Ivory was often concealed in shipments of timber or timber products, such as furniture.

> "Check price now brother... cow's organs."
>
> **MAY 2022**

> "Charcoal bbq can export to US, Australia ?? Please check all paper."
>
> **MAY 2022**

Products that provided a return on investment were particularly attractive as cover load commodities, and the network made ongoing attempts to identify the best cover load commodity for their shipments. In the period leading up to their arrests, the network was in the process of sourcing copper cathodes and cashews, which were suspected to have been intended as cover load commodities for a major pangolin scale shipment. They were also exploring the use of products such as frozen meat, cow intestines, diesel oil, and barbecue charcoal.

When moving shipments by air transportation, weight restrictions meant the criminal network was more likely to rely on creative concealment strategies or the assistance of trusted insiders to avoid scrutiny. For example, intelligence indicates that some rhino horn shipments were sent via air freight concealed in the false base of wooden crates containing other products. Rhino horns would be wrapped in transparent plastic film and aluminium foil to conceal the odour, and for rhino horns that were being smuggled in passenger luggage, the entire suitcase would also be wrapped in layers of plastic clingfilm (Images 4-5).[7] Other intelligence indicates that packages of tiger and/or lion bone paste may have been described as "chocolate" on shipping documents.



Images 4–5. Rhino horns seized in February 2019 at Istanbul Atatürk Airport in Türkiye, individually wrapped in plastic. **Credit:** Demirören News Agency and İhlas News Agency.

Use of business infrastructure

The criminal network appeared to use legitimate companies to provide the necessary business infrastructure, contacts, and transportation lines to move their shipments, which likely helped their criminality to go undetected for many years. For example, intelligence indicates that one of their rhino horn suppliers in southern Africa owned a seafood business and regularly exported containers of frozen seafood to other countries in the region. He is suspected to have used these containers to smuggle rhino horns safely between countries, while intelligence analysis identified some rhino horn shipments potentially linked to the network that were concealed in seafood consignments. One of the lieutenants who worked with the network as a rhino horn buyer also owned a timber business in southern Africa with an established record of exporting shipments to Asia, which is suspected to have provided cover for the export of some of the larger wildlife shipments.

Shell companies were also used to receive consignments and mask the identity of the network principal as the owner, if the shipment was detected by law enforcement authorities. This modus operandi has been previously observed in Vietnam, with two major shipments seized at Tien Sa seaport in Danang found to have been imported by shell companies.[8]

7 For example, as demonstrated in the images of individually wrapped rhino horns from this suspected seizure linked to the criminal network: Hurriyet Daily News (2019), Rhino Horns Seized at Istanbul Atatürk Airport, <https://www.hurriyetdailynews.com/photo-rhino-horns-seized-at-istanbul-ataturk-airport-141102#photo-1>.

8 VnExpress (2022), Man Arrested for Trading Rhino Horns, Ivory through Shell Companies, <https://e.vnexpress.net/news/news/man-arrested-for-trading-rhino-horns-ivory-through-shell-companies-4479259.html>.

Use of corrupt transport enablers

Trusted insiders at seaports and airports were essential to the criminal network's operations. These associations appeared to be financially driven, with intelligence suggesting the network paid shipping companies and freight forwarders to falsify shipping documents and customs declarations, and paid customs officers to allow containers and cargo to pass unchecked. It is surmised that the reliability of these associations could vary, and when they failed shipments could be intercepted, forcing the network to adapt and reroute via other locations.

Intelligence suggested that freight forwarders employed by the criminal network would facilitate the selection of consignee and consignor entities for bills of lading or air waybills, so the principal could avoid using his own contact details on shipping documents. It is suspected that freight forwarders would also assist by falsifying details on the shipping documents to obscure the contents of the container or package, repacking the goods into different containers or packages, or switching shipping documents at transit points to conceal the originating port in Africa.

The criminal network appeared to cultivate associations with customs officers at key seaports and airports. These associates would assist the trafficking process by advising on inspection techniques, policing methodologies, the best transport days and times when "friendly" officers would be present, days to avoid when other officers were likely to be present, and concealment commodity trends. Intelligence suggests that the regular rotation of customs officers every two to three months in some countries posed logistical challenges for managing customs clearance processes, requiring constant work to maintain "the road".

"But there is small checking at that point... So some of my custom advice.. Me to wait."

"My agent just inform me now... That those people of the head office have left."

JULY 2019

"Still need to be waiting to buy the middle part for guarantee... Can't be rush on this."

"Middle part here means buying transit part at Doha."

MARCH 2022

"Need to wait few days because customs in Noi Bai Airport are all replaced... New network is building."

MARCH 2022

Other intelligence indicates the criminal network could be alerted to seizures of their shipments before that information became public, pointing to close communication with their trusted associates working inside the seaports and airports. Intelligence also suggested that where their contacts were strong enough, they may have attempted to use the early notification to try to "buy back" their goods by paying their connections or exerting pressure to release the seizure.

"Da Nang just had a bang."

"Things get tough when it is on the public media."

JANUARY 2022

"Pilot is being kept in Turkey already."

"2 packages failed in Turkey."

"Pilot is released."

JANUARY 2019

Collaboration and alliances

WJC intelligence analysis identified a trend of collaboration between Asian crime bosses to traffic significant quantities of wildlife products from Africa to Asia, similar to collaboration trends seen among high-level drug trafficking syndicates. Analysis of this network's activities identified multiple instances of high-level alliances between the principal and other network bosses, which likely aimed to reduce individual exposure and financial risk when smuggling large shipments of wildlife products. It is the clearest example of this trend that WJC has observed in its wildlife crime investigations, pointing to the resourcefulness of the criminal networks and their willingness to work cooperatively for mutual benefit rather than in competition with each other.

Co-investing in the purchase and shipment of large quantities of wildlife products and pooling logistical resources at both ends of the supply chain appeared to be key collaboration strategies. This could involve the principal coordinating product sourcing and shipping logistics on the African side while a different network boss coordinated the receipt of the shipment in Asia and distribution of products to the various owners. The investor-sharing model allowed multiple networks to buy into a single shipment, sharing transportation costs and ensuring profits for all investors, while minimising individual losses if products were seized. Intelligence identified several seizures linked to this criminal network that involved multiple investors.

Alliances could also involve exchanging knowledge on preferred trafficking routes or sharing the contact details of brokers, suppliers, or transport enablers in specific countries.

"Hello, I'll transport stuff to sell 55–30, will you join? We'll all bear together if you join, or else we will bear it and... I'll send you your portion only, and will transfer ours to Mozambique."

APRIL 2019

"Ok, you also join and sell products. I just confirm the way to do business."

"You'll handle the rest after products are arrived."

JUNE 2019

"There is a problem in Doha..."

"Yours is only 4kgs."

"The rest belongs to [redacted], [redacted] and [redacted]."

APRIL 2022





4. Tracing illicit financial flows

Estimated product investment and financial losses

It is estimated that, between 2018 and 2022, the network invested at least USD 1.26 million at the wholesale level to purchase more than 17 tonnes of wildlife products (Figure 4). This is based on intelligence of known and suspected seizures connected to the network, several shipments that are suspected to have been successfully smuggled to Asia without law enforcement detection, and price data collected from the principal's business ledgers and communication with brokers. The products are estimated to have a potential value of around USD 8.7 million in Asian wholesale markets. These are conservative estimates based on intelligence covering this four-year period; however, it is suspected that the principal's involvement in wildlife trafficking extended back at least a decade prior to his arrest.

The financial losses incurred by the network due to known and suspected law enforcement seizures are estimated at over USD 900,000, based on intelligence of the wholesale product values in Africa (Table 1). When accounting for the potential value of these products at wholesale markets in Asia, the prospective financial losses represented by these seizures could have amounted to USD 6.97 million. It is noted that both the product investment and financial loss estimates represent an incomplete picture, otherwise a loss on investment to this extent would not make for an attractive long-term business venture.

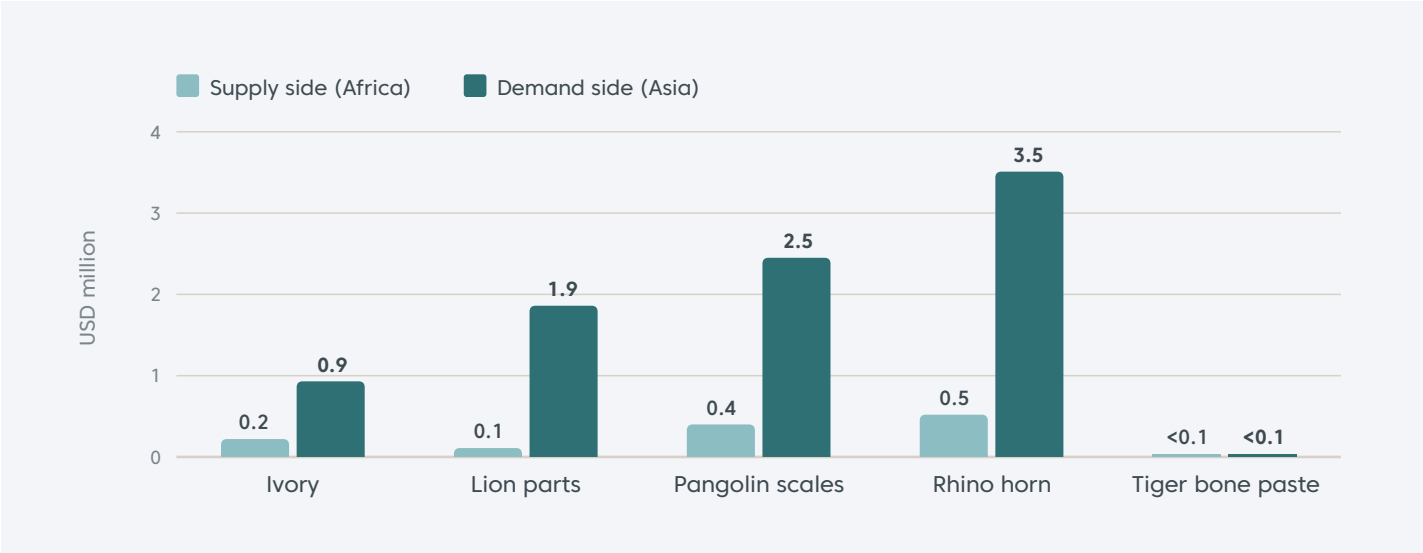


Figure 4. Estimated value of wildlife products the network was suspected to have purchased between 2018–2022.

Table 1. Estimated financial losses incurred by the network due to law enforcement seizures, 2018–2022.

Category	Supply side (USD)	Demand side (USD)
Known	$752,000	$4,800,000
Suspected	$148,000	$2,170,000
Total	**$900,000**	**$6,970,000**

Table 2. Estimated value of wildlife consignments suspected to have been successfully shipped by the network, 2018–2022.

Category	Supply side (USD)	Demand side (USD)
Suspected	$360,000	$1,790,000

Investigation findings indicate the network had major financial backing and resilience, demonstrated by its ability to continue purchasing products and smuggling shipments even immediately after seizures. The estimated losses hint at how much profit the network likely generated from successful sales in Asia for the business to continue despite such periodic losses.

Payment methods

Financial analysis identified that the network used various payment methods—including cash payments, bank transfers, and cryptocurrency—to move money and pay their suppliers, vendors, and collaborators in different countries.

BANK TRANSFERS

The network's principal advanced lump sum payments to his lieutenants via bank transfers to purchase wildlife products, cover load commodities, packaging materials, and to make payments to shipping facilitators and other service providers. The principal would regularly discuss product pricing with his lieutenants through text messages and phone calls, giving his approval (or instructions otherwise) for purchases. Lieutenants kept detailed ledgers recording their transactions, including the date of purchase, product type, quantity, price paid, and currency conversion rates, deducting these amounts from the lump sum payment to track their expenses (Image 6). If additional money was needed, lieutenants would ask the principal to transfer another tranche of funds.

Intelligence suggests the lieutenants maintained local bank accounts in each country of operation. Once the lump sum advance was received, lieutenants would make payments to suppliers and service providers, usually either by cash in the local currency or by bank transfer from the local bank account.

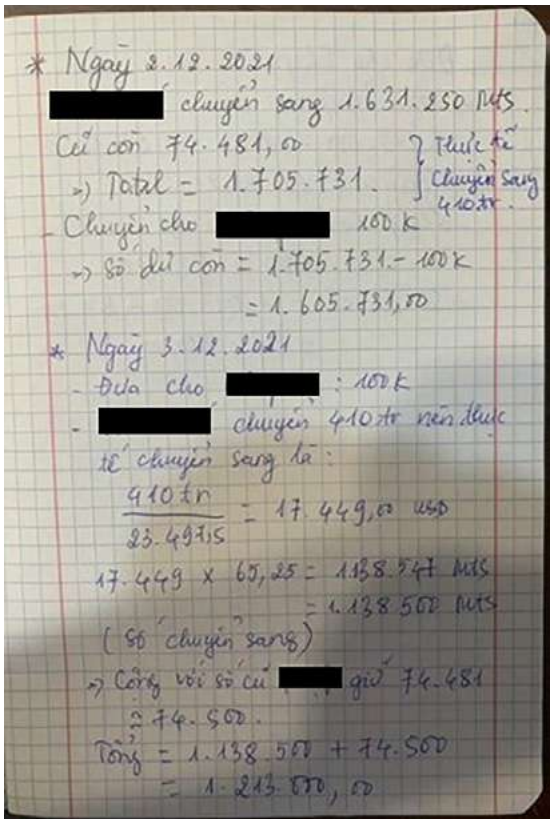


Image 6. Example of a ledger maintained by a lieutenant responsible for procuring rhino horn (names have been redacted). **Credit:** Wildlife Justice Commission.

USE OF THIRD-PARTY ACCOUNTS

Intelligence obtained during the investigation indicates that the criminal network also used third-party bank accounts, such as the accounts of family members or other trusted associates, to receive payments for the sale of wildlife products in Asia.

The use of bank accounts to receive payments for high-value wildlife products—either via third-party accounts or even directly to the suspect's personal accounts—is a common finding across many of WJC's investigations. Transactions are often conducted quite openly, with little or no effort to hide illicit activities. This practice shows that financial institutions are exposed to money laundering risks from wildlife crimes and illustrates the importance of appropriate due diligence and Know Your Customer (KYC) checks to identify potential suspicious transactions.

USE OF CURRENCY CONVERTERS

Intelligence also suggests that the network used the services of black-market currency converters as a money laundering strategy and to obtain foreign currency for business operations. For example, the investigation identified two suspects who provided currency exchange and cash delivery services to the network principal between at least 2020 and 2021, with transactions amounting to approximately USD 470,000. In most transactions, the principal appeared to exchange local currency for US dollars, although some transactions appeared to exchange local currency for Chinese yuan. The principal would transfer funds to a nominated bank account, and the purchased currency would be delivered in cash to his home. These transactions were conducted via various nominated accounts, including the personal accounts of the currency converters, the account of one of their associates, and accounts named as a wine company and a law firm, which were likely fraudulent businesses.

CRYPTOCURRENCY

The investigation uncovered evidence of the criminal network using cryptocurrency to purchase wildlife products and pay transportation costs. The network used a specific cryptocurrency on a particular blockchain network[9] to transfer funds to a third-party remitter, who then transferred the corresponding amounts in local currency to the bank accounts of the intended recipients. This was the first time that WJC investigations confirmed a wildlife trafficking network using cryptocurrency. During an eight-month period in 2021, the investigation identified at least 43 cryptocurrency transactions sent from the network to the money remitter, amounting to more than USD 200,000 (Image 7).

While traditional payment methods (cash and bank transfers) still dominate wildlife trafficking transactions, cryptocurrency is reportedly growing in use among wildlife traffickers.[10] The use of new technologies and non-traditional methods to commit crime could potentially indicate criminal networks are evolving in response to increasing law enforcement attention and a perceived need to better conceal their activities.

UNODC has reported the cryptocurrency used in this case to be among the most popular cryptocurrencies used by organised crime groups in East and Southeast Asia and the preferred choice for crypto money launderers in the region. Other analysis by TRM Labs indicated that more than half (58%) of illicit crypto activity conducted globally in 2024 occurred on the specific blockchain in question, although levels were even higher in previous years.

Analysis of the cryptocurrency crime landscape has found that transnational organised crime groups are increasingly using cryptocurrency in an attempt to obscure their payments and proceeds and evade law enforcement detection.[11] However, while criminal networks may be turning to cryptocurrency for its per-

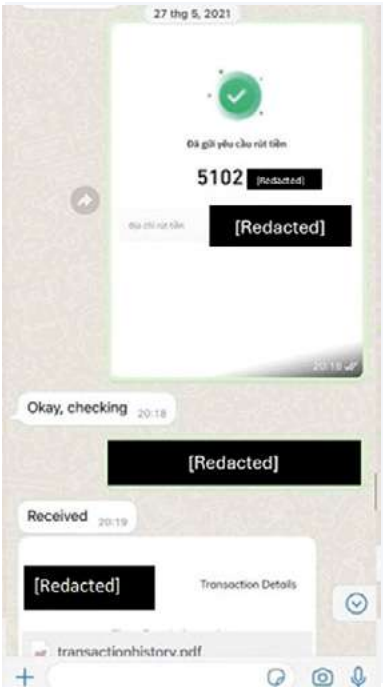


Image 7. Cryptocurrency transactions sent from the network to the money remitter in 2021. **Credit:** Wildlife Justice Commission.

9 The specific cryptocurrency in question is pegged to the US dollar. The cryptocurrency issues tokens on a range of blockchain networks, making it easy to convert. It is one of the most traded tokens globally in terms of daily volume, which also makes it one of the most liquid cryptocurrencies. Neither the cryptocurrency nor the blockchain can be named in this report, to protect ongoing investigations.

10 Chainalysis (2025), The 2025 Crypto Crime Report, p.124.

11 Ibid, p.118.

ceived anonymity and ease of conducting cross-border transactions, they often lack the technical expertise to effectively conceal their activities.[12] For example, blockchain analysis of a suspected cluster of wildlife trafficking addresses suggested that payments were flowing from wallets to local centralised exchange accounts without any major effort to conceal the activity,[13] and transactions were predominantly simple peer-to-peer transfers and direct exchange cash-outs.[14]

This could present potential opportunities for law enforcement, as transactions through regulated centralised exchanges can be traced more easily on blockchain than the traditional use of cash.[15] However, the lack of crypto tracing expertise in many jurisdictions affected by wildlife trafficking is an obstacle that needs to be overcome.[16] Traffickers' use of cryptocurrency could also present greater potential for disruption because centralised currency issuers typically have powers to freeze or permanently delete tokens in wallets that are linked to confirmed criminal activities.[17]

Financial indicators of potential criminality

The types and patterns of transactions associated with the criminal network and the money remitter reveal certain indicators of potential criminality. Given the similarities in the way many wildlife trafficking networks operate, the following "red-flag" indicators could potentially be a useful reference for financial institutions to help identify suspicious financial activity linked to wildlife trafficking. These indicators should be considered alongside other information financial institutions know about their client and other factors surrounding their transactions.

12 Ibid.
13 Ibid, p.125.
14 Ibid, p.131.
15 Ibid.
16 Ibid, p.125.
17 Chainalysis (2024), Stablecoins 101: Behind crypto's most popular asset, <https://www.chainalysis.com/blog/stablecoins-most-popular-asset/>.

PATTERNS ASSOCIATED WITH THE CRIMINAL NETWORK

- One large incoming transaction (representing a lump sum advance) which may be followed by multiple smaller outgoing transactions to different payees over a period of several weeks (representing product purchases).
- As an indication of the frequency and value of payments, analysis indicates that the network made payments equivalent to approximately USD 200,000 to a major wildlife broker over a period of four weeks in October–November 2020, likely representing the sourcing of batches of products in preparation for a major shipment.
- Payment descriptions may refer to products used to hide illicit shipments, such as cashew nuts, timber, potatoes, frozen meat, and seafood.
- Cryptocurrency payments were commonly equivalent to approximately USD 5,000. The network appeared to be careful to remain under the mandatory reporting threshold for foreign currency transfers in the countries where they conducted business.

PATTERNS ASSOCIATED WITH THE MONEY REMITTER

- The overall balance of incoming transaction value is roughly equivalent to the outgoing transaction value; funds do not accumulate in the account.
- There may be hundreds of different payers and hundreds of different payees.
- Structured transactions to payees with very small variations in the amount per transaction. For example, in this case, payments were often in the amounts of 1,000,000; 999,999; 1,000,010; or 1,000,009 in the local currency. The money remitter appeared to be careful to remain under the mandatory reporting threshold for single transactions in the country in which they conducted business.
- Structured transactions to the same payee were often sent all on the same day and in quick succession, often within just a few minutes of each other.
- Vague and generic payment descriptions such as "sent from [name of bank]", "bills", "goods", or the surname of the original payer.
- Some structured transactions were described according to the number of transactions, for example: "first", "second", "third", and so forth.

5. The changing global trafficking landscape

WJC's previous report, *Disruption and Disarray: An analysis of pangolin scale and ivory trafficking, 2015-2024*, described some of the key global trafficking trends for pangolin scales and ivory observed during the previous decade, based on reported seizure data, open-source research, and criminal intelligence and investigation findings of WJC (Figure 5).

It highlighted that in 2019, pangolin scales and ivory were being trafficked from Africa to Asia in extraordinary quantities, with multiple record-breaking seizures of both products reported at seaports in Asia. In the years between 2015 and 2019, several distinct trafficking trends emerged, including the dominance of the Nigeria-Vietnam maritime shipping route and the prevalence of large, mixed shipments of both commodities. Rapid growth in the average size of shipments during these years pointed to the involvement of organised crime networks operating at an industrial scale, given the financial capital, access to business infrastructure, and corrupt connections required to ship such large consignments.

In 2020, the arrival of the COVID-19 pandemic forced a dramatic shift in the global wildlife trafficking landscape. Pangolin scale and ivory seizures plummeted and have remained comparatively low in the years since. The disruption was sudden but appears to be holding.

WJC's analysis identified a substantial decrease from 2020 to 2024 in the number of multi-tonne seizures and a reduction in the trend for combined shipments of both pangolin scales and ivory. The average weight of seizures decreased to approximately half the size they were at the trafficking peak in 2019, suggesting traffickers were reducing their product investments. Furthermore, an increased proportion of significant seizures were occurring in Africa prior to export.

The extent of the disruption is most evident when considering the relative absence of significant seizures of African pangolin scales at the demand side of the supply chain in Asia. No significant African pangolin scale

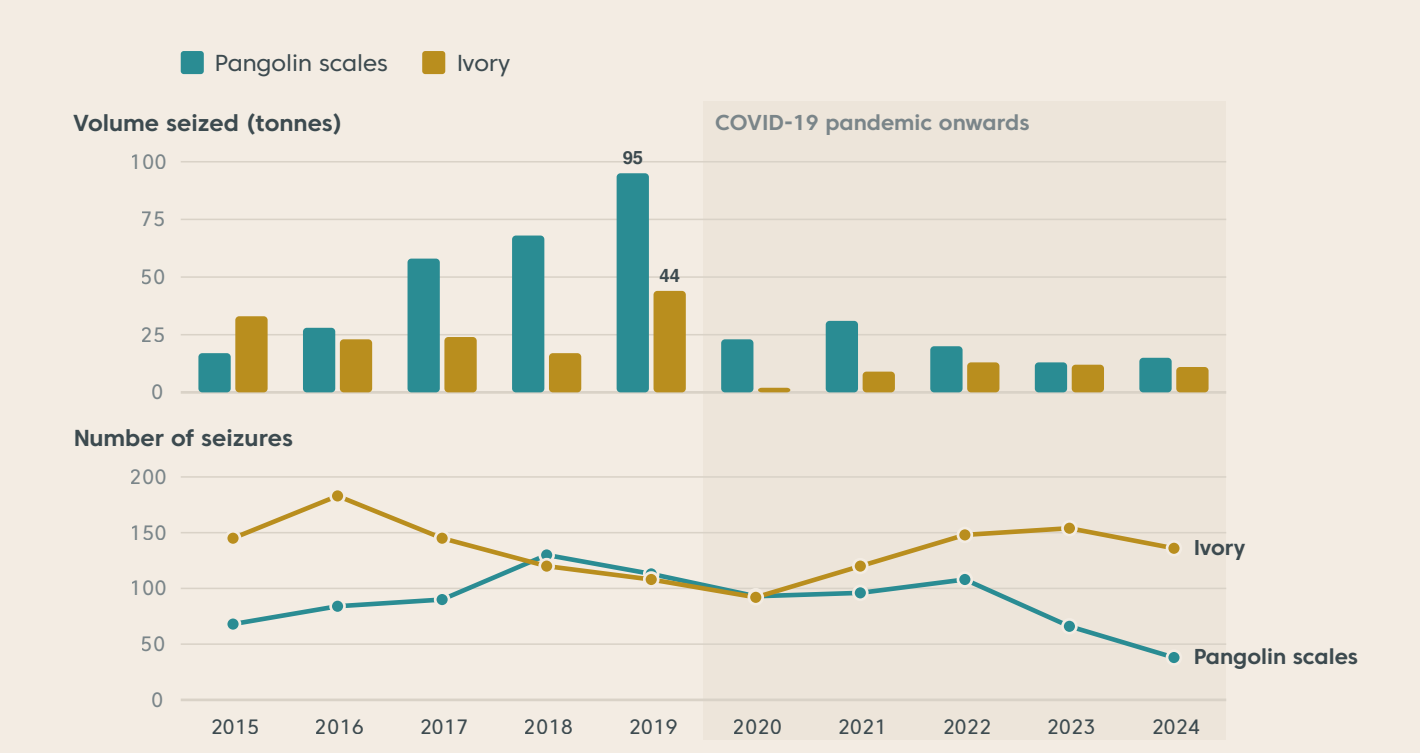


Figure 5. Global reported pangolin scale and ivory seizures, 2015–2024.

seizures have been reported at any airport globally for more than seven years.[18] Until October 2025, the last significant African pangolin scale seizure reported at a seaport was a shipment originating in Nigeria of 6.2 tonnes of pangolin scales and 456 kg of ivory seized at Tien Sa Port in Danang, Vietnam in January 2022. For more than three and a half years after that, the only significant pangolin scale seizures were land-based seizures of stockpiles or product in the process of domestic transportation.

In October 2025, the Vietnam Border Guard Command seized more than seven tonnes of illegal goods transported from Indonesia on two wooden boats, including 4.2 tonnes of pangolin scales (Image 8).[19] Preliminary statements indicated that the scales were sourced from Sunda pangolins (*Manis javanica*) in Indonesia, as opposed to African pangolin species. At the time of writing, at least four more seizures suspected to be Sunda pangolin scales have been reported at seaports in Singapore in December 2025[20] and in Indonesia in



Image 8. Seizure in Vietnam in October 2025, which included 4.2 tonnes of pangolin scales smuggled from Indonesia.
Credit: Xuan Loc / Tuoi Tre News.

18 The last reported airport seizure was a shipment of 1,530 kg of pangolin scales seized at Port Harcourt International Airport in Nigeria, October 2019, destined for China. Refer to: <https://guardian.ng/news/customs-seizes-n826m-pangolin-scales-tomato-paste-others-in-port-harcourt/>.

19 Tuoi Tre News (2025), Authorities in Vietnam's Vinh Long seize over 7 tonnes of wildlife products illegally transported from Indonesia, <https://news.tuoitre.vn/authorities-in-vietnams-vinh-long-seize-over-7-tonnes-of-wildlife-products-illegally-transported-from-indonesia-103251005091336352.htm>.

20 Tushara, E. (2026), Singapore authorities seize largest cargo of scales from over 2,200 Asian pangolins, The Straits Times, <https://www.straitstimes.com/singapore/spore-authorities-seize-largest-cargo-of-scales-from-over-2200-asian-pangolins>.

February,[21] April[22] and July[23] 2026. Intelligence from WJC investigations suggests these incidents signify crime displacement.

LAW ENFORCEMENT IMPACT

While the pandemic generated the initial shock, intelligence from WJC's investigations points to strengthened and targeted law enforcement playing an important role in changing the global trafficking landscape. COVID-era border closures, lockdowns, and travel restrictions had severe and immediate impacts as traffickers struggled to move products. Criminal networks (including the one in this case study) that had previously been highly mobile were forced to conduct the bulk of their dealings remotely and increase their reliance on African facilitators and brokers to organise shipments. This shift presented a novel opportunity for law enforcement targeting, and within WJC's investigations it enabled the penetration of key networks that had previously been identified as major players based on 2015-2019 seizure data.

As the proactive law enforcement response has increased in African trafficking hotspots, intelligence indicates that the pressure of consistent arrests and prosecutions is severely disrupting the criminal networks. Fear, distrust, and the loss of many pivotal actors appear to be eroding the capacity of organised crime networks to move their goods out of Africa. There also appears to be a lower risk appetite to bear the financial losses in the event of law enforcement interception, which could be contributing to the smaller average sizes of shipments observed in the seizure data analysis.

The collapse of the criminal network featured in this case study has coincided with these fundamental changes, both epitomising and contributing to the disruption observed in the global wildlife trafficking landscape.



Image 9. Seizure of 3,053 kg of pangolin scales at Tanjung Priok port in Jakarta, Indonesia in February 2026. **Credit:** Mongabay.

21 Raissa, A. (2026), Jakarta port authorities seize 3 tons of pangolin scales in Cambodia-bound container, Mongabay, < https://news.mongabay.com/2026/03/jakarta-port-authorities-seize-3-tons-of-pangolin-scales-in-cambodia-bound-container/>.
22 Raissa, A. (2026), Investigators eye organized crime links in 3-ton pangolin scale haul at Jakarta port, Mongabay, <https://news.mongabay.com/2026/04/investigators-eye-organized-crime-links-in-3-ton-pangolin-scale-haul-at-jakarta-port/>.
23 Murdaningsih, D. (2026), 'Bea Cukai Tanjungpinang Gagalkan Penyelundupan 216 Kilogram Sisik Tenggiling', Direktorat Jenderal Bea Dan Cukai <https://republika.co.id/berita//tigmo9368/bea-cukai-tanjungpinang-gagalkan-penyelundupan-216-kilogram-sisik-tenggiling>.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6. Conclusions and lessons learned

The arrests and convictions of the network principal, two of his lieutenants, and a senior broker are major achievements in disrupting a prolific, well-financed, and sophisticated trafficking network. Law enforcement agencies in at least four countries were directly involved in conducting wildlife seizures and arrests connected to the network. This case represents a blueprint for a proactive law enforcement approach targeting the top tier of transnational organised wildlife crime, and lessons can be drawn to inform future investigation efforts.

1. Strategic targeting of high-value individuals

With support from WJC, partner law enforcement agencies implemented a highly effective targeting strategy focused on the individuals operating at the top levels of the criminal network and those playing a pivotal role in the network's activities. Rather than focusing on the easier-to-reach low-level poachers, couriers, or traders, efforts were invested in conducting intelligence analysis to map the criminal networks and identify and pursue key figures such as crime bosses, their lieutenants, and senior brokers.

A strategic targeting approach offers several advantages:

- **Efficiency:** Resource-limited law enforcement agencies can maximise their impact by focusing on the individuals who are critical to network operations.
- **Disruption:** Removing the leadership and funding sources of a criminal network significantly weakens its ability to regroup after arrests and prosecutions.
- **Intelligence gains:** High-level targets often possess valuable information that can expose other network members, associates, and trafficking methods.
- **Deterrence:** High-profile arrests and prosecutions send a strong message that wildlife crime is a serious offence.

2. International cooperation to target transnational networks

The criminal network featured in this report was highly mobile, with lieutenants and the principal constantly travelling to do business across Africa and Asia. The transnational aspect of their operations worked in their favour, as no single law enforcement agency had a full view of their activities, and agencies were sharing only limited intelligence on the network prior to this investigation.

The principal was initially a target in WJC's rhino horn trafficking investigations in southern Africa, but the realisation that the largest part of his business was in West Africa only came after analysis of a major pangolin scale and ivory seizure, which changed the course of the investigation. Criminal networks are not restricted by national borders in the same way that law enforcement agencies are, and international cooperation, including intelligence sharing and joint investigations, was vital to understand the full scope of this network's criminal activities and target other key associates located in different countries along the supply chain. Law enforcement agencies worked together to share intelligence, which led to the arrest and prosecution of an additional network member, a result that was only possible due to international cooperation.

3. Conducting further investigation after a seizure and the use of special investigative techniques

Analysis of the major seizure of pangolin scales and ivory in 2021 was the breakthrough point of the investigation that led to the identification of the principal as the owner of the seized products. The intelligence that underpinned the initial linkage was developed and corroborated through further investigation, which included the use of undercover investigation and covert surveillance. These types of special investigative techniques are essential to reach the top-level members of criminal networks and build robust briefs of evidence for prosecution. This is especially true for network principals, who usually remain at arm's length from the wildlife products, directing operations from behind the scenes. The use of special investigative techniques in this case enabled the collection of evidence that ultimately proved the principal's connection to the 2021 seizure and resulted in his successful conviction.

4. Collaboration through multistakeholder partnerships

Multistakeholder partnerships among law enforcement agencies, civil society organisations, financial institutions, the transport sector, and academia can provide valuable input, technical assistance, and capacity building to assist with investigating and disrupting transnational wildlife trafficking networks.

These partnerships can bring many benefits for law enforcement agencies, including:

- Additional sources of intelligence or information to feed into the investigation.
- Specialised expertise to support investigations, including intelligence analysis, forensic analysis, species identification, and care for live animals rescued in operations.
- Financial support and other material resources, which can be a force multiplier.
- A broader transnational focus, which can help make new linkages or open new lines of inquiry in an investigation.
- Different nationalities, which can help overcome language barriers when investigating transnational criminal networks.

In this case, WJC partnered with law enforcement agencies in two countries with joint investigations targeting different sections of the network. This demonstrates the positive results and impact that can be achieved through collaboration. As a civil society organisation, WJC was able to support its law enforcement partners with both local and foreign undercover and surveillance operatives, reliable intelligence, and specialised analytical services, which enabled the investigation to penetrate much deeper into the network.

5. Leveraging digital evidence through phone data analysis

Data extractions and analysis from seized mobile phones were instrumental in the investigation into the criminal network. It not only enabled the collection of additional evidence for the prosecution of the principal and his two lieutenants, but it also yielded a wealth of new intelligence that initiated other investigations, including the investigation into a senior broker, and continues to inform other ongoing investigations.

Key benefits of conducting phone analysis include:

- Mapping communication patterns and identifying network hierarchies.
- Identifying other network members or criminal associates, including suppliers, brokers, customers, and shippers.

- Establishing the criminal history and threat level of the target.
- Identifying intelligence on the network's modus operandi.
- Supporting prosecutions with admissible digital evidence.

6. Financial investigation and following the money

Following the money is crucial in investigations of organised crime networks because tracing financial transactions can expose key individuals, hidden connections, and operational patterns, and can provide solid evidence for prosecutions. Crucially, financial investigations can also identify funds and assets that are the proceeds of crime, which can then enable the confiscation and forfeiture of money and property that has been illegally gained. Asset forfeiture is the most effective way to disrupt criminal operations, by removing their profits and preventing the reinvestment of proceeds in committing further crimes. Financial investigation can also identify potential money laundering offences, as criminals use various techniques to try to disguise the illegal origin of their funds. Money laundering charges can be brought in addition to the predicate offence to increase the seriousness of the case and the potential penalties available during prosecution.

Financial investigation was an important part of the overall investigation in this case, enabling the identification of the network's use of cryptocurrency, its payment patterns, and the identities of money remitters used by the network. These financial transactions formed a key part of the prosecution's evidence against the principal for the primary wildlife trafficking offences, although authorities did not pursue asset seizure or money laundering charges, which was a missed opportunity. However, money laundering charges were brought against the senior broker, which significantly increased his prison sentence.

The use of cryptocurrency in wildlife-related transactions could present potential opportunities for law enforcement authorities, as transactions through regulated centralised exchanges can be traced more easily on blockchain than the traditional use of cash. This may require capacity building and training for authorities in affected jurisdictions to help them trace crypto transactions. Law enforcement authorities should also work with centralised currency issuers when wallets linked to confirmed criminal activities have been identified, to enable tokens to be frozen or even deleted.



Appendix: Methodology

INTELLIGENCE AND INVESTIGATION

WJC's investigation approach is modelled on recognised and proven law enforcement methodology. WJC uses a combination of undercover operatives, covert surveillance, and networks of trusted informants to collect intelligence and evidence across the supply chain, from source to destination.

A team of criminal intelligence analysts uses data and information to guide the work of the undercover investigators in infiltrating trafficking networks and gathering evidence, and the information they unearth feeds back into the intelligence cycle. Where possible, all intelligence is verified and corroborated to ensure it is as robust and accurate as possible and is documented to an evidentiary standard. This rigorous approach means WJC can support law enforcement agencies to build solid cases for prosecution, and its staff and consultants are willing to testify in court on the strength of the evidence it collects.

SUBJECT RATING AND TARGETING

WJC has developed an internal risk rating system to assess a subject's level of criminality according to factors such as their role in the network, modus operandi, geographical range across which they operate, and estimated conservation impact, among others. The system classifies subjects from level 1 (lowest level) to level 5 (highest level).

Table 3. The WJC target rating system.

Level	Definition
1	Low level of criminality. Subject is not assessed to pose a great threat.
2	Low- to mid-level trafficker who may play an enabling role for higher level subjects.
3	Mid-level trafficker who is likely operating at the international level and involved in some decision-making.
4	Mid- to high-level trafficker who may have access to corrupt contacts and legitimate businesses to facilitate their crimes.
5	A significant threat who orchestrates and finances the international movement of wildlife trade at a commercial scale.

SEIZURE AND SHIPMENT DATASET

Based on intelligence collected during the investigation, WJC compiled a dataset of wildlife seizures and shipments linked to the criminal network between 2018 and 2022. These incidents were classified into three different categories, based on an assessment of the strength of the intelligence:

- **Known:** Seizures that were confirmed to be connected to the network and were part of the prosecution's cases.
- **Suspected:** Shipments and seizures that were highly likely to be connected to the network, based on intelligence collected during undercover investigations and data identified during phone analysis.
- **Possible:** Shipments and seizures that may have been linked to the network, but there were some gaps in the information available. To ensure this report contains only the most reliable intelligence, possible shipments and seizures were not included in the summary of the main investigation findings.

The wildlife trafficking incidents documented in this report involved raw rhino horns, whole or in pieces, and teeth from any rhino species; raw elephant ivory, whole tusks or pieces, from any elephant species; raw pangolin scales and claws from any pangolin species; and big cat skeletons, bones, claws, canines, and bone paste suspected to be from lion or tiger species. The incidents occurred at various locations during the period from 1 September 2018 to 31 December 2022.

This dataset is based solely on intelligence identified during WJC's investigation and does not represent the entire period of the criminal network's operation or the full scope of its trafficking activities. This means there are likely to be gaps in the dataset, and as such, the analysis in this report is indicative only.

ESTIMATING THE NUMBER OF ANIMALS REPRESENTED BY THE DATASET

Estimations of the number of animals represented by the quantity of wildlife products in the dataset of wildlife seizures and shipments were calculated using the following sources and methodologies:

- **Rhinos**: Based on an estimated average of 4.265 kg of horn (front and back horn) equating to one rhino. This estimate is an average of the weight of horns carried by black rhinos (2.65 kg) and white rhinos (5.88 kg). Refer to: D.J. Pienaar et al. (1991), 'Horn growth rates of free-ranging white and black rhinoceros', Koedoe 34(2) 97-105.
- **Pangolins:** The maximum number of pangolins is estimated based on the median scale weight reported for the smallest African pangolin species, white-bellied pangolin (*Manis tricuspis*), which is 184.31 g. Refer to: CITES (2025), 'Pangolins (*Manis* spp.) - Report of the Animals Committee', Seventy-eighth meeting of the Standing Committee, Geneva (Switzerland), <https://cites.org/sites/default/files/documents/SC/78/agenda/E-SC78-67-01.pdf>.
- **Elephants:** Based on an estimated average weight per tusk of 5 kg, therefore 10 kg of ivory (one pair of tusks) is equivalent to one elephant. The estimated number of elephants is based on previous estimates of a mean tusk weight of 5.45 kg between male and female African elephants, and an approximation of 10 kg of ivory per elephant. Refer to: RB Martin et al. (2012), 'Decision-Making Mechanisms and Necessary Conditions for a Future Trade in African Elephant Ivory', Report of Working Party to CITES Standing Committee, May 2012, CITES SC62 Doc. 46.4, <https://cites.org/sites/default/files/eng/com/sc/62/E62-46-04-A.pdf> and UNODC (2016), World Wildlife Crime Report, p.42.
- **Lions:** Based on the average mass of a cleaned lion skeleton without soft tissue, which was calculated to be 9 kg. Referring to: V.L. Williams et al. (2015), '"Skullduggery": Lions Align and their Mandibles Rock!', *PLoS ONE* 10(11): e0135144.
- **Tigers:** Based on intelligence collected during WJC investigations of the number of kilograms of tiger bone paste that can be made from one tiger.

PRICE DATA ANALYSIS

WJC obtained prices for the various wildlife products at both the supply side in Africa and the demand side in Asia based on intelligence obtained during undercover dealings with traffickers and brokers connected to the criminal network, and through analysis of the mobile phones of the arrested suspects. All prices represent wholesale black market prices per kilogram and were converted to USD at the time of collection to make them comparable across the supply chain.


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