



**Wildlife Justice**  
Commission

EXECUTIVE SUMMARY

# Scaling up: The Rapid Growth in the Industrial Scale Trafficking of Pangolin Scales

2016-2019



# Executive Summary

**Pangolins have become** a highly prized commodity, illegally trapped, killed and trafficked by organised crime networks between Africa and Asia. Analysis of seizure data of smuggled pangolin scales in the last four years shows a significant and rapid increase in the volume being trafficked.

**The findings and conclusions** from the Wildlife Justice Commission (WJC)'s Intelligence Development Unit clearly point to organised crime networks operating on an industrial scale, which is rapidly expanding year on year, putting an entire species at risk.

**Between 2016-2019** an estimated 206.4 tonnes of pangolin scales were intercepted and confiscated from 52 seizures. The WJC believes this is only a fraction of the total being trafficked, as it is likely that a significant proportion of smuggling is not detected.

**Analysis of the seizure data** over the four-year period shows an increase in trafficking at unprecedented levels. Nearly two-thirds of the tonnage seized – 132.1 tonnes – was detected in the last two years (2018-2019). In 2019, the average weight of a single pangolin scale shipment was 6.2 tonnes, compared with 2.2 tonnes three years earlier.

**All eight species** of pangolins have Appendix I designation under the Convention on International Trade in Endangered Species (CITES) – the highest level of protection, prohibiting any international trade. De-

spite that and national laws offering them protection in range states in Africa and Asia, populations of Asian pangolins have been so depleted by illegal trade, that African pangolins are now being increasingly targeted by traffickers to supply demand in Asia. Four of the eight pangolin species are found in Africa with three of these species found in Central African forests: the tree-dwelling white-bellied, black-bellied pangolins, and the ground-dwelling giant pangolin. Concerningly, deforestation across west and central African countries has reduced their habitat, making them even more vulnerable to poaching<sup>1</sup>.

**While the scale of trafficking** is vast and still growing, understanding the dynamics of the criminal networks and their operations remains limited.

**Combining analysis** of reported seizure data and the WJC's investigative findings, the WJC Intelligence Development Unit has built a comprehensive understanding of the key countries, smuggling routes, shipping methods, destinations and pricing of pangolin scales. New trends have also been identified which outline the need for this problem to be tackled as a transnational organised crime with the same urgency and methodology used to address other serious crimes.

## Geography of Crime

Six of the 27 identified countries and territories disproportionately involved in the trafficking of pangolin scales were found to be linked to 94% (193.2 tonnes) of all seized contraband (206.4 tonnes) during the period analysed in this report. Detection rates (the proportion of seizures detected in-country, compared to shipments that have originated, transited or were destined for certain countries) in these six identified countries varies as follows: China (50%), Democratic Republic of Congo (DRC) (0%), Hong Kong SAR (100%), Nigeria (16.7%), Singapore (33.3%) and Vietnam (40%).

**Nigeria and Vietnam** play prominent roles in the supply chain. Between 2016 – 2019, they were linked to almost 70% of pangolin scale seizures, which amounted to 143.6 tonnes. Furthermore, during 2018-2019 this prevalence increased; as 84% of all detected shipments involved one or both countries. The Nigeria - (Singapore) - Vietnam smuggling route has also been identified as a significant transportation route for the smuggling of scales on their own or in combination with ivory.

**A direct trafficking route** between Nigeria to Vietnam is relatively new, having only been documented since May 2018. Its emergence possibly reflects the strengthening relationship between traffickers operating in these countries or an emergence of new trafficking networks in Nigeria.

**African countries** now represent the majority of locations of origin for seized scales trafficked to Asia. Analysis has identified Nigeria, DRC and Cameroon as being the biggest players, however, intelligence gaps regarding the sourcing and harvesting of scales still exist.

**Nigeria** appears to be one of the biggest consumers of pangolin meat, especially among the wealthy middle class<sup>2</sup> and within the large Chinese community in Nigeria<sup>3</sup>. It is also the country most heavily implicated in the supply chain of pangolin scales, especially in the years 2018-2019.

**It is suggested** that the bodies of the poached pangolins may be fueling the bushmeat market in



*Image 1 - 20 July 2018, 7.1 tonnes of pangolin scales seized from a container at Tsing Yi Cargo Examination Compound, Hong Kong SAR originating from Nigeria<sup>4</sup>.*

Africa as no bodies or skins were recovered amongst the seized scales discussed in this report.

**Nigeria** has become a global export hub, linked to 55% (n=113.1 tonnes) of scales seized between 2016 and 2019. The rise of Nigeria as a prominent actor in the supply chain of the trafficking of pangolin scales may be made possible because of weak law enforcement interventions at ports, compounded by the assistance of corrupt officials that facilitate shipments to pass undetected. Corruption and wildlife crime are inextricably linked. In 2018,

Nigeria scored 27/100 (with 0 being the most corrupt) by the Corruption Perception Index, highlighting its prevalence<sup>5</sup>.

### The Presence of Organised Crime

**The number**, size and location of detected shipments gives some insight into the scale of pangolin trafficking and the reach of the criminal networks behind it. However, additional intelligence and evidence gathered by WJC investigators leave no doubt that significant quantities of pangolin scales are being successfully smuggled into the market, undetected.

**To illustrate**, in Vietnam during the past three years (2017-2019), the WJC has been made aware of the wholesale stockpiling of more than 16 tonnes of pangolin scales which have been offered for sale to WJC investigators. In one case, in September 2018, the WJC provided evidence to the Vietnamese Environmental Police that led to the seizure of 780 kg of pangolin scales - the largest batch ever seized by authorities in Vietnam outside a port - and the arrest of a significant broker.



**WJC investigators** have also gathered information from brokers who have access to larger stockpiles in Vietnam but who have been unable to smuggle them over the border into China, due to a fear of detection. In December 2019, one major trafficker reported to the WJC that transportation is problematic and only a small proportion of scales have been successfully smuggled into China from Vietnam by his network.

**Organised crime** is not species specific and criminal networks will shift to other commodities if more profit can be made. To illustrate, investigations by the WJC indicate that criminals previously involved in the ivory trade are now also intricately involved in the trafficking of pangolin scales. The smuggling of ivory combined with pangolin scales is rapidly increasing, doubling in number and tripling in volume between 2017 and 2018. Increasingly, combined shipments have a greater proportion of pangolin scales than ivory, which suggests that there has been a change in commodity type by the criminal networks.

**Price data collected** through WJC investigations over the past three years has yielded additional insight into this trade related to the street value for pangolin scales and demonstrates the variation in prices. All prices obtained relate to the wholesale value of products. Collected price data indicates that the value for scales in Africa are, as expected, much lower than in Asia. During 2018 the price per kilogram (kg) in Nigeria was USD 52. While, in Asia the prices were much higher and sold for USD 226 in Indonesia and USD 283 in Vietnam. The high-

est retail price was recorded in Lao PDR where it reached USD 739 per kg. No price data for 2019 is available for Africa but in 2019 the retail price in Asia increased and sold for USD 350 in Malaysia, USD 355 in China, and USD 149 per kg in Vietnam. More data is needed to understand pricing trends in relation to the street value of pangolin scales.

## Smuggling Dynamics

**Trafficking by sea** remains the preferred method for moving large quantities of pangolin scales, accounting for 53.8% (n= 28 of 52) of the seizures throughout the reviewed period. Seizures of pangolin scales at international seaports are increasing, but it is also likely that a significant proportion of smuggling by sea still passes undetected<sup>6</sup>.



*Image 2 - 1 July 2017, 11.9 tonnes of pangolin scales discovered in a container at Yantian port, China<sup>7</sup>.*

**Trafficking by air** has seen a sharp decrease during 2018-2019. This may be because air cargo cannot accommodate such vast quantities, but also presents a higher risk of detection due to more rigorous airfreight procedural checks.

### Markets and values

**In China**, even though the poaching, selling and trade in pangolins are illegal<sup>8</sup>, pharmaceutical companies are permitted to produce traditional medicine that contain pangolin parts which are sold to certain hospitals, as part of TCM<sup>9</sup>.

**Several large pharmaceutical companies** are using pangolin products in medicine, it was that in 2016, there were purportedly 209 pharmaceutical companies that were licensed to produce 66 types of medication that contained pangolin scales as well as 700 hospitals licensed to sell them<sup>10</sup>.

**One popular Chinese retail website** selling unprocessed pangolin scales disguised the true content of the products by labelling them as 'resin' or 'emulsion'<sup>11</sup>. TCM websites openly advertise pangolin scales as well as meat or live pangolins for captive/breeding purposes<sup>12</sup>.

**It is clear that** traders illegally selling pangolin parts can easily conceal their activities on unlicensed websites, and also effectively launder the products through legitimate platforms such as licensed TCM websites. Exceptions also extend beyond China's

borders, with medicine markets in Vietnam, Thailand, Lao PDR and Myanmar, legally selling TCM remedies containing pangolin scales<sup>13</sup>.

**It is unclear** from where pharmaceutical producers source the "legal" pangolin scales for their products. The international ban on importing pangolin scales which has existed since 2017, coupled with the high demand within China<sup>14</sup> and the lack of captive breeding facilities for pangolins, suggests that producers are using illegally imported wild pangolin scales as their main supply.



*Image 3 - 10 December 2016, 3.1 tons of pangolin scales discovered in timber shipment in Shanghai, China<sup>15</sup>.*

**Although the scale** of pangolin trafficking is far greater than reported data suggests, there have been some notable breakthroughs during the past 12 months.

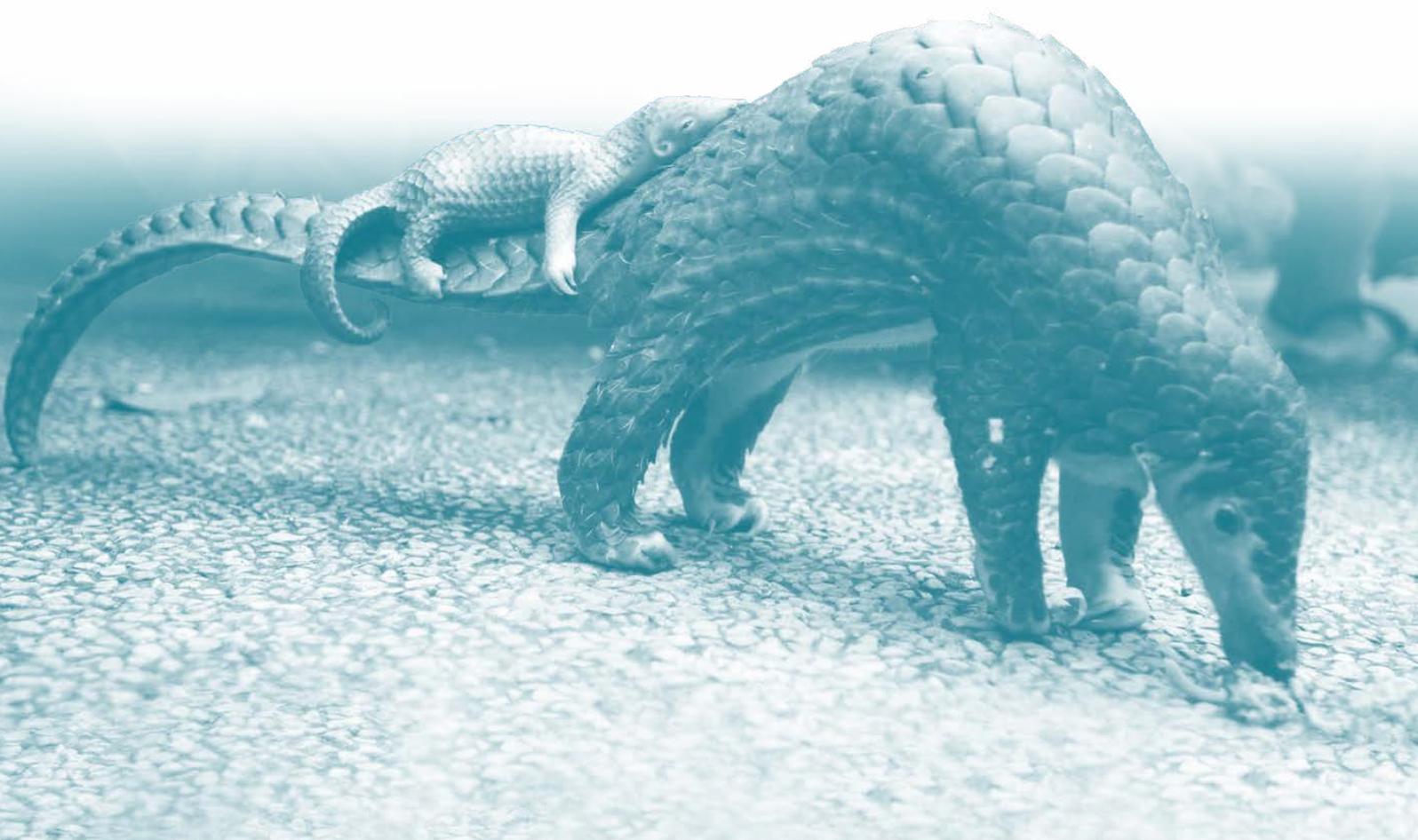
**A potential change** in market demand may be realised, following the announcement in China that from January 2020, its national insurance will no longer cover medicines containing pangolin products.

**This policy change** does not only affect pangolins but also a number of other species and may create a shift away from traditional cultural beliefs toward an acceptance that there is no medicinal value in products made from animal parts<sup>16</sup>.

**Although the volume** of scales being trafficked is increasing, so too are detection rates. The WJC investigators believe greater use of controlled delivery

operations, where shipments are tracked through the entire supply chain, will yield much needed intelligence on the operations of the criminal networks and also act as a deterrent in some cases. A year-long investigation and arrest of 18 suspects in China reported in December 2019<sup>17</sup> to address trafficking across an entire network is a highly successful example of how such approaches could and should work.

**The trafficking of pangolin scales** continues on an industrial scale. The coordination and infrastructure required to facilitate the harvesting, production, storage and transportation of this volume of pangolin scales is vast. A coordinated transnational approach to investigations, intelligence gathering and the use of law enforcement tools applied to other major crimes, such as controlled deliveries, are required to tackle it and bring high-level perpetrators to justice.



This report aims to bridge some of the intelligence gaps in the understanding of the architecture of pangolin trafficking, by identifying key trends and dynamics. However, more intelligence is needed to fully map the networks behind the criminal activity and to identify opportunities to meaningfully disrupt and dismantle the trafficking networks.

## References

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<sup>2</sup> <https://www.pangolinreports.com/nigeria/>

<sup>3</sup> <https://oxpeckers.org/2019/05/africas-pangolins/>

<sup>4</sup> [https://www.customs.gov.hk/en/publication\\_press/press/index\\_id\\_2239.html](https://www.customs.gov.hk/en/publication_press/press/index_id_2239.html)

<sup>5</sup> <https://www.transparency.org/country/NGA>

<sup>6</sup> According to INTERPOL, only 10 to 15 percent of illegal wildlife trade transiting Europe is detected. INTERPOL: Global Wildlife Enforcement: Strengthening Law Enforcement Cooperation Against Wildlife Crime, 2018, p. 10. 11 European [https://www.interpol.int/content/download/5179/file/WEB\\_Wildlife%20ProspectusMarch2019.pdf](https://www.interpol.int/content/download/5179/file/WEB_Wildlife%20ProspectusMarch2019.pdf)

<sup>7</sup> <http://www.ecns.cn/2017/11-30/282682.shtml>

<sup>8</sup> <https://www.pangolinreports.com/china/>

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<sup>10</sup> [http://www.trafficchina.org/sites/default/files/briefing\\_paper\\_of\\_pangolin\\_trade.pdf](http://www.trafficchina.org/sites/default/files/briefing_paper_of_pangolin_trade.pdf)

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> <https://www.nationalgeographic.com/magazine/2019/06/pangolins-poached-for-scales-used-in-chinese-medicine/>

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<sup>15</sup> <https://archive.shine.cn/metro/society/Customs-finds-3-tonnes-of-pangolin-scales/shdaily.shtml>

<sup>16</sup> <https://www.insurancebusinessmag.com/asia/news/breaking-news/chinese-insurers-to-stop-covering-pangolinbased-medicines-176735.aspx>

<sup>17</sup> <https://www.chinadaily.com.cn/a/201912/12/WS5df-17ba2a310cf3e3557d8f2.html>



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