



Wildlife Justice
Commission

Black Business

Illegal Rhino Horn Trade
Dynamics in Nhi Khe, Viet Nam,
from a Criminal Perspective

A CASE STUDY

September 2017



EXECUTIVE SUMMARY

Demand for rhino horn has grown exponentially over the last ten years, fuelling an unprecedented slaughter of rhinos in Africa, and to a lesser extent in India. To provide some insight into the scale of the current problem, in South Africa alone, the number of rhinos killed in 2007 was reported as low as 13, yet by 2016 this number had risen to 1054¹. While this signalled a decrease from the highest figure reported in 2014 of 1215 poached rhinos, levels are still significant and leaves little room for complacency.

In early August 2017, the WJC were offered 76 rhino horns (comprising both front and back horns) in one single incident, highlighting the organised nature of this trade, where subjects are trading in great volume. This image serves as a reminder that the trade in raw rhino horn continues unabated and that demand shows no signs of subsiding.

This assessment describes the dynamics of rhino horn trafficking in Nhi Khe (Viet Nam) and the fluctuations of the value of raw rhino horn presented to our undercover operatives during the course of our field investigations and hopes to inform the wider debate on what drives the demand for rhino horn.



76 Rhino horns presented to WJC, August 2017

The Wildlife Justice Commission (WJC) was established in March 2015 with the goal of exposing and assisting in the disruption of transnational organised wildlife crime. Its first investigation revealed a major criminal network involved in trafficking the parts and products of several CITES Appendix I listed species and centred upon the small village of Nhi Khe, Viet Nam². The investigation resulted in a Case File and over 5000 pages of evidence against 51 subjects, and was first submitted to authorities in Viet Nam in January 2016 and to China in February 2016. Further evidence was collected during the second part of the investigation conducted from January-June 2016, and submitted to Vietnamese and Chinese authorities as an Update of the Case File in August 2016.

Nhi Khe predominantly targets a Chinese clientele, with the larger shops arranging the smuggling of products into China. Interpreters were seen to play a pivotal role in connecting Chinese buyers with traders and facilitating negotiations. In addition to the physical trade occurring on premises in Nhi Khe, we noted the widespread use of WeChat, and to a lesser extent, Facebook to advertise illegal wildlife products. Vietnamese traders were found to use Chinese bank accounts for the receipt of payments for wildlife products, thus facilitating money laundering and the movement of significant illicit financial flows. In addition, we observed an emerging trend of Chinese buyers using WeChat Wallet, a payment application within WeChat, to pay Vietnamese suppliers for goods purchased.

Of particular note, was the extent to which this network was involved in the large-scale trafficking of rhino horn. During the investigation valuable insight was gained about the illegal rhino horn trade in Vietnam and in supply to China, the networks involved and the drivers that perpetuate this illicit trade. During the entire investigation, an estimated 1,061 kg of rhino horn, in both raw and processed form were observed in trade.

¹ South African Department of Environmental Affairs (2017)

² More information about the case and the work of the Wildlife Justice Commission is available here: www.wildlifejustice.org

An extrapolation from the quantity of horn parts and products observed to the estimated number of rhinos this equates to suggests these commodities represent a minimum of 401 and a maximum of 579 rhinos (Table 1). In addition, the total monetary value of these commodities was calculated to equate to approximately USD 42,700,000.

TABLE 1: TOTAL MONETARY VALUE* AND NUMBER OF ESTIMATED INDIVIDUAL RHINOS

Commodity Type	Number of Individuals		Estimated Value	
	Min.	Max.	VND	USD
356 horns / tips	178	356	952,400,000.00	42,700,000
Processed products	223	223		
	401	579		

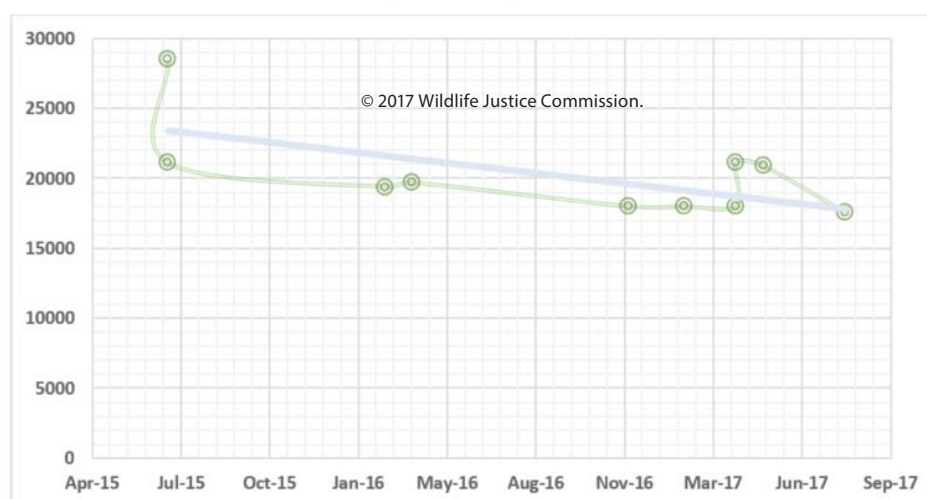
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The Value of Rhino Horn

The commonly cited value of raw rhino horn in the public sphere sits around the USD 65,000 per kilo mark, while our investigation finds that the value offered to our operatives has consistently been less than half that price since we began recording price data in July 2015. The current value of rhino horn in Viet Nam for Chinese customers ranges between USD 17,600-22,300 based on current prices received from different sellers in April, May and August 2017. While the most valuable part of the horn is the tip which weighs, at most, approximately one kilo is valued between USD 25-30,000. This is due to its shape; the tip is considered to hold greater artistic value.

Following this investigation (commenced in October 2016), the WJC continued to monitor trade and interact with those prolific subjects of interest deemed to present the greatest threat using the same methodology and means of communications as used previously in Nhi Khe. This has allowed for the collection of more than two years of price data specifically for raw rhino horn. Between the first data point being obtained in July 2015 until the latest data point in August 2017, the price of raw rhino horn has decreased in value by 38% (10,900 USD), in addition, the linear trendline based upon these prices indicate an overall decline (Chart 1).

CHART 1: RAW RHINO PRICES IN USD (JULY-2015-AUGUST-2017)



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Our investigation found variations in the value of rhino horn products depending on which part of the horn they derived from. Rhino horn products can be discerned by the colours they come in; black, brown, yellow and to a lesser extent red. The blacker the horn the more expensive it will be, by extension, the lighter the colour, the cheaper it is. Looking at the cross section of a rhino horn, the most precious part is in the centre, where it appears to be very dark or even pure black (sometimes referred to as ‘meat’), and gradually fades into brown, red, and yellow or even white until the outer ring where the skin grows (Image 1 & 2). Lastly, the price of the horn and horn products is influenced by whether it concerns/derives from the first horn (the front horn) or the second horn (back horn) of the rhino. The first horn is generally sold at a higher price than the second horn.



IMAGE 1: Carved Rhino Horn Pieces, Offered in May 2016



IMAGE 2: Carved Rhino Horn Pieces, Offered in May 2016

A Criminal Enterprise with Role and Responsibilities

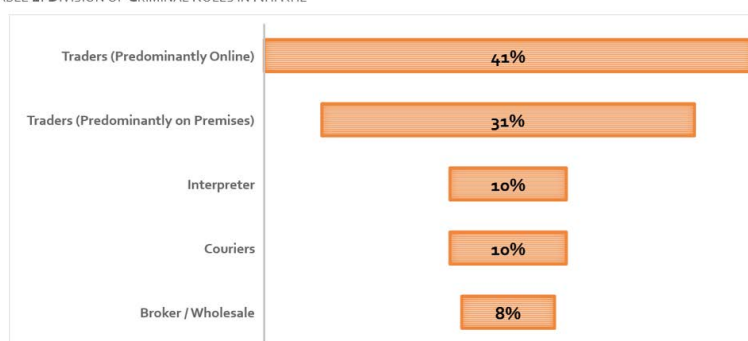
Certain aspects of the way in which illegal trade occurred in the village are synonymous with that of a criminal business and demonstrates how Nhi Khe operations are consistent with that of a legitimate business. We found the illegal trade operations (from acquisition to customer delivery) mirrored stages of a legitimate business.

Examples of business rules found operational in Nhi Khe, included:

- Discounts offered if higher quantities of goods are purchased in bulk;
- Deposits paid up front (mainly quoted between 20-30%);
- Refunds offered if the shipment is intercepted by enforcement agencies;
- Clear roles of individuals along the chain facilitating the movement of goods from source to consumer;
- Use of international bank accounts.

The different roles of each of the 51 identified subjects were determined as well as their chosen method of trade. As expected, most fulfilled the roles of sellers and traders (Table 2), and this varied in terms of the volume and diversity of species they trade in. As suspected, not all actors assume the same role or have the same level of power and to fully comprehend this, Social Network Analysis (SNA) was applied³ to the network. SNA provides a method to aid understanding of networks and is particularly relevant for operational aspects of a criminal network, to determine hierarchy and power.

TABLE 2: DIVISION OF CRIMINAL ROLES IN NHI KHE



Our investigation found that interpreters played an integral role to the success of the overall operation and as such were a central enabling factor in Nhi Khe. Of the 51 persons of interest subject to the investigation, five (10%) were identified as fulfilling the role of a Chinese interpreter, all of which were female Vietnamese nationals who typically accompanied Chinese customers to the village. Day rates for translators were quoted at 150 RMB [USD 22]. The interpreters facilitated meetings and transactions by assuming the role of central communicators. They escorted clients to the village to view products and helped to negotiate prices. They were found to have good access to other parts of the network and therefore to have much greater visibility across the network. SNA analysis finds that four (8% of the criminal base) of the interpreters⁴ were found to be linked to 40% of the remaining network. It is assessed that translators are intrinsic to the criminal network identified in our investigation, as they have a good level of coverage and play a key connecting role. The removal of such players is likely to impact operations and disrupt illegal activity.

The situation we witnessed in Nhi Khe is a unique one, which may be replicated in other locations across Viet Nam, albeit, to a much lesser extent. The market appeared to be dictated by a drive to supply Chinese clientele, particularly, with worked rhino horn products. Although Viet Nam is known to be a primary destination for rhino horn, it is also clearly a highly significant transit area for products ultimately bound for China. Research that has relied on a review of trafficking patterns and expatriate involvement in Africa may have overstated the significance of the domestic Vietnamese market. It is unclear whether these two distinct markets have long been in place or how the situation has evolved over time.

In contrast, and unexpectedly, any appetite for rhino horn for medicinal purposes did not materialise. Of over 8,000 images of illegal parts and products that we documented during the investigation, less than five featured offcuts of rhino horn. Consideration may need to be given to the over-representation of a Chinese market due to the use of covert investigators of Chinese ethnicity during the investigation.

The volume and therefore prevalence of wildlife trade in the village is facilitated by the following situational factors:

- the role of the translators (*enabling communications between seller and buyer*);
- the geographical proximity of Nhi Khe to the Chinese border (*reducing effort required from the offender, both buyer and seller*);
- connections to shops in China owned by Vietnamese nationals associated by family connections to subjects in Nhi Khe (*legitimatising the transport of goods*);
- the utilisation of a Chinese social media platform (*not currently monitored in Viet Nam*);
- the use of Chinese accounts by Vietnamese nationals (*circumventing Vietnamese financial monitoring systems*).

Corruption continues to be a significant influencing factor facilitating illegal wildlife crime across all parts of the trade chain⁵. Indications of corruption were apparent during the investigation, including the reported bribery of local and provincial government officials by traders in Nhi Khe to ensure protection; the bribery of Vietnamese Customs officials to allow the smuggle of wildlife into China; and traders demonstrating to have prior knowledge of police inspections. Without truly tackling this issue of corruption, the situation is likely to persist.

Demand for wildlife in consumer states is a social problem that requires a multi-faceted solution. One aspect of which must incorporate social science based solutions such as behavioural change⁶. While such initiatives are already underway in Viet Nam most have been seeking to reduce demand for endangered animals for medicinal purposes, and may fail to consider the emerging, yet popular use of rhino horn as items of jewellery, libation or tea cups in China.

³Clifton, K.L. and Rastogi, A., (2016). Curbing Illegal Wildlife Trade: The Role of Social Network Analysis. IUCN

⁴The fifth interpreter was not found to be linked to any other person of interest during the investigation

⁵https://www.unodc.org/documents/data-and-analysis/wildlife/World_Wildlife_Crime_Report_2016_final.pdf

⁶Duncan Graham-Rowe (2011). Biodiversity: Endangered and in demand. Nature 480 S101–S103

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THE INVESTIGATION

The first part of the investigation took place from June-December 2015 and resulted in a case file ('Case File') which was submitted to responsible authorities in Viet Nam in January 2016 and to China in February 2016. Further evidence was collected during the second part of the investigation conducted from January-June 2016, and submitted to Vietnamese and Chinese authorities as an Update of the Case File in August 2016.

In total, the Case File and its Update contained over 5000 pages of evidence against 51 subjects, 33 of which were identified in 2015, and an additional 18 in 2016.

Evidence collected by the Wildlife Justice Commission confirmed reports by journalists dating back as early as 2012 that Nhi Khe, a village just south of Hanoi, Viet Nam, was a major hub for the processing and sale of rhino horn, ivory, tiger, pangolin and helmeted hornbills. Whereas in 2015 the illegal trade was conducted openly and with apparent impunity, in 2016 the trade became progressively covert and displaced to locations outside Nhi Khe in response to increased law enforcement activity.

Nhi Khe predominantly targeted a Chinese clientele, with the larger shops arranging the smuggling of products into China. Interpreters were seen to play a pivotal role in connecting Chinese buyers with traders and facilitating negotiations. In addition to the physical trade through premises in Nhi Khe traders were widely using WeChat and, to a lesser extent, Facebook to advertise illegal wildlife products.

Vietnamese traders were found to use Chinese bank accounts for the receipt of payments for wildlife products, thus facilitating money laundering and the movement of significant illicit financial flows. In addition, we observed an emerging trend of Chinese buyers using WeChat Wallet, a payment application within WeChat, to pay Vietnamese suppliers for goods purchased.

Indications of corruption were apparent, including the reported bribery of local and provincial government officials by traders in Nhi Khe to ensure protection; the bribery of Vietnamese Customs officials to allow the smuggle of wildlife into China; and traders demonstrating to have prior knowledge of police inspections.

During the one-year investigation large amounts of rhino horn, ivory, tiger and other illegal wildlife parts and products were observed for sale. The quantity of raw and processed rhino horn alone amounted to 1,061 kg, with an estimated value of USD 42.7 million.

Despite extensive efforts by the WJC to engage the Vietnamese authorities in a dialogue concerning the situation in Nhi Khe, the evidence presented elicited very little response. Therefore, it was decided to hold a Public Hearing in the Peace Palace in The Hague, on 14 and 15 November 2016. During this event highlights from the investigation were publicly presented and witnesses and experts were heard in the presence of a panel of independent experts (the Wildlife Justice Commission's Independent Review Panel). The Designated Independent Review Panel unanimously validated the Case File and its Update and made a set of recommendations aimed at responsible Vietnamese authorities, the CITES Standing Committee and all Parties to CITES, UNCAC and UNTOC⁷.

⁷The Designated Independent Review Panel's Recommendations are available here: www.wildlifejustice.org/wp-content/uploads/2016/11/AP-rec.pdf (English) and here: www.wildlifejustice.org/wp-content/uploads/2016/11/DECISION_VIETNAMESE_final_.pdf (Vietnamese)

FINDINGS AND DISCUSSION

Here we will discuss the following findings from our investigation: Quantities and prices of raw and processed rhino horn observed in trade; Type of products offered for sale; Factors affecting price; Terminology used by traders in relation to the rhino horn trade; the Supply to China (Market to Consumer); Characteristics of the criminal network (Criminal base); the Connecting role of the translators; Indications of a criminal business; Observed displacement of the crime; and the Influence of corruption and competition.

Quantities and Prices

During the entire investigation, approximately 1,061 kg of rhino horn, in both raw and processed form were observed in trade. An extrapolation from the quantity of horn parts and products observed to the estimated number of rhinos this equates to suggests these commodities represent a minimum of 401 and a maximum of 579 rhinos (Table 2). In addition, the total monetary value of these commodities was calculated to equate to approximately USD 42,700,000.

TABLE 2: TOTAL MONETARY VALUE* AND NUMBER OF ESTIMATED INDIVIDUAL RHINOS

Commodity Type	Number of Individuals		Estimated Value	
	Min.	Max.	VND	USD
356 horns / tips	178	356	952,400,000.00	42,700,000
Processed products	223	223		
	401	579		

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Type of Products

We detected many variations of rhino horn products for sale, as well as the raw horns themselves. Table 3⁸ provides an overview of the type and number of products directly observed for sale and highlights the prevalence of artefacts and jewellery products in trade. Beads made from rhino horn were the most frequently occurring item for sale.

TABLE 3: TYPE AND NUMBER OF RHINO HORN PARTS AND PRODUCTS OBSERVED FOR SALE⁸

	Whole horn/tips	Bangles	Bracelets	Pendants	Beads	Libation Bowl/Cups	Offcuts (in kg)
2015	41	43	79	183	514	139	15.6
2016	315	738	451	1,595	9,609	960	109
Total	356	781	530	1,778	10,123	1,099	124.6

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⁸It should be noted that the increase in products recorded in 2016, is a likely subsequence of an enhanced investigation compared to 2015, as opposed to an increase in the prevalence of products in trade

The reported price of rhino horn has experienced volatility in recent years. Yet the observed value of raw rhino horn in and around Nhi Khe was much lower than the heavily cited USD 65,000 per kg⁹. As the prices of products were not provided on every occasion, an average was used to estimate the total monetary value of the observed rhino horn trade. For raw rhino horn, this resulted in an average price per kg of USD 26,653 (Table 4). Delivery costs, specifically for rhino horn, were also captured and were found to vary based, as expected, on the destination. Table 5 also provides the average price for processed rhino horn products. Documented prices were given for delivery to China only (Table 4). Findings from the investigation highlight that the quoted delivery fee to smuggle rhino horn across the border from Viet Nam into China is higher than that charged for ivory. This is deemed to reflect the difference in monetary value, with the price per kg for rhino horn being much higher than that of ivory.

TABLE 4: AVERAGE PRICES FOR RAW AND PROCESSED RHINO HORN IN NHI KHE AND DELIVERY FEES TO CHINA

Rhino – processed/kg		Rhino – raw/kg		Delivery fee/kg <u>Pingxiang</u>		Delivery fee/kg Fujian	
							
VND	USD	VND	USD	VND	USD	VND	USD
2,448,685,000	109,000	598,759,645	26,653	8,020,005	357	20,061,245	893

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TABLE 5: AVERAGE PRICES FOR PROCESSED RHINO HORN BY ITEM TYPE, PER KILO

Bangles, bracelets, beads or pendants		Libation cups (including bowls and lids)		Whole rhino horn, and chopped pieces or other raw materials		Offcuts	
							
VND	USD	VND	USD	VND	USD	VND	USD
1,680,000,000	74,685	1,474,500,000	65,500	600,000,000	26,653	3,000,000,000	134,841 ¹⁰

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⁹<https://unchronicle.un.org/article/putting-stop-global-environmental-crime-has-become-imperative>

¹⁰This price was quoted to a non-Chinese speaking investigator at a price that was later identified as being clearly above the normal market price in the village.

Prices

While our investigation documented the offering of products and parts of rhino horn, the price for each was not available as frequently. Furthermore, most prices were captured during person-to-person conversations while on location in the village. To enable a richer comparison between the prices of raw and processed products, prices were taken from at least eight different sellers and from a minimum of seven different locations both within and outside Nhi Khe.

The prices obtained for processed rhino horn products shown in Table 6¹¹ indicate a range of pricing methods, taking size and quantity into consideration. The original currency for each price quoted is also illustrated together with the converted USD price for comparison purposes.

TABLE 6: DOCUMENTED PRICES OF PROCESSED RHINO HORN PRODUCTS¹¹ © 2017 Wildlife Justice Commission.

Date	Method of Trade	Product Type (processed)	Price (USD)	Price (VND)	Price (RMB)	Converted USD price*	Measurement
Jul-15	Observation	Rhino horn bracelet (1.8-2.0cm diameter)			500	73	Gram
Jul-15	Observation	Pure black rhino horn bracelet (1.8-2.0cm diameter)			1,000	146	Gram
Jul-15	Observation	Pure black rhino horn bracelet			7,500	1,100	Gram
Jul-15	Observation	Rhino horn bracelet	350			350	Tael
Jul-15	Observation	Rhino horn bracelet weighing 11g			4,400	640	Per unit
Jul-15	Observation	Rhino horn bangle		78,000,000		34,000	Per unit
Jul-15	Observation	Rhino horn bracelet			24,500	3,600	Per unit
Oct-15	WeChat	Rhino horn libation cup			380	55	Gram
Mar-16	Observation	Rhino horn bangles			320	47	Gram
Mar-16	Observation	Red rhino horn bangle			15,700	2,300	Per unit
Mar-16	Observation	Rhino horn cup			300,000	43,700	Gram

The quoted prices for raw products presented in Table 7 indicates that rhino horn powder is the cheapest product. This was confirmed in discussions with traders who stated powder derives from offcuts which is used for medicinal purposes in tea. As powder mainly derives from offcuts it is a much cheaper commodity compared to other forms of unworked rhino horn¹².

TABLE 7: DOCUMENTED PRICES OF RAW RHINO HORN PARTS¹³ © 2017 Wildlife Justice Commission.

Date	Method of Trade	Product Type / Description	Price (VND)	Price (RMB)	Converted USD price*	Measurement
Jul-15	Observation	Lower quality rhino horn		120-130	17-19	Gram
Jul-15	Observation	Medium quality rhino horn		150-160	22-23	Gram
Jul-15	Observation	High quality rhino horn		180-200	26-29	Gram
Jul-15	Observation	Square piece of rhino horn	750,000,000		32,900	Tael
Jul-15	Observation	Front rhino horn		190-200,000	27,700-29,100	Kilo
Jul-15	Observation	Back rhino horn		130-160,000	18,900-23,300	Kilo
Jul-15	Observation	Whole rhino horn (2.5kg)	650,000,000		28,500	Kilo
Mar-16	Observation	Rhino horn powder		20	3	Gram
Mar-16	Observation	Whole rhino horn		70,000	10,200	Tael
Mar-16	Observation	Rhino horn tip (648g)		133,400	19,400	Per unit
Apr-16	Observation	Front rhino horn		130-140,000	19,000-20,400	Kilo
Feb-17	Observation	Raw rhino horn	410,000,000		18,000	Kilo
Apr-17	WeChat	Raw rhino horn			21,120	Kilo
May-17	Meeting	Raw rhino horn			20,909	Kilo
Aug-17	WeChat	Front rhino horn			17,603	Kilo

¹¹Converted on 24th February 2017. Rates: 1 CNY = 0.145564 USD US Dollar 1 USD = 6.86982 CNY. 1 VND = 0.0000438300 USD US Dollar 1 USD = 22,815.42 VND.

¹²Transcript 29/03/2016

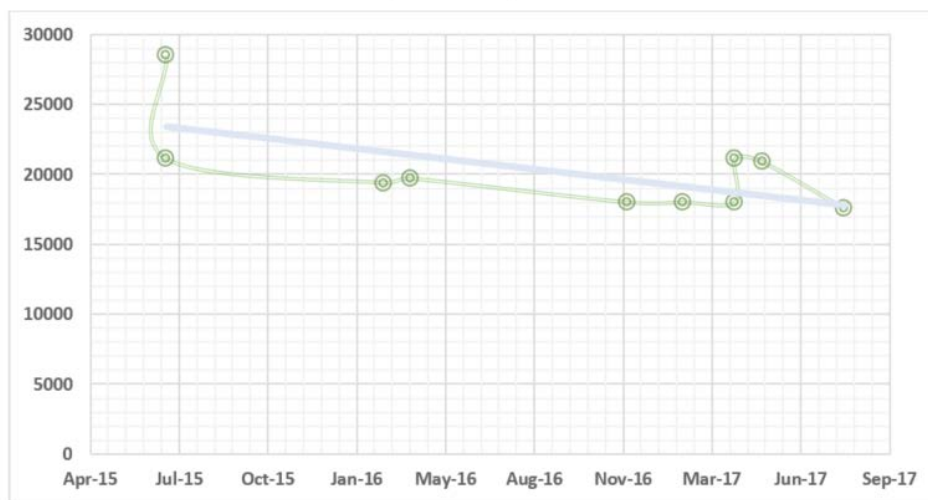
¹³Converted on 24th February 2017. Rates: 1 CNY = 0.145564 USD US Dollar 1 USD = 6.86982 CNY 1 VND = 0.0000438300 USD US Dollar 1 USD = 22,815.42

Temporal Analysis of Raw Horn Prices

Following this investigation (commenced in October 2016), the WJC continued to monitor trade and interact with subjects of interest using the same methodology and means of communications as used previously in Nhi Khe.

*This allowed for the collection of **more than two years of price data specifically for raw rhino horn**. Between the first data point being obtained in July 2015 until the latest data point in August 2017, the price of raw rhino horn has decreased in value by 38% (10,900 USD), in addition, the linear trendline based upon these prices indicate **an overall decline** (Chart 1).*

CHART 1: RAW RHINO PRICES IN USD (JULY-2015-AUGUST-2017)



© 2017 Wildlife Justice Commission.

Factors Affecting Price

Morphologically, the structure and colouring of rhino horn differs from base to tip. If a rhino horn is cut from the middle and held up to the light, it has a translucent, amber glow. In contrast, horn tips are compressed, almost black and the material is much firmer than the base of the horn¹⁴.

Our investigation found variations in the value of rhino horn products depending on which part of the horn they derived from.

Rhino horn products can be discerned by the colours they come in; black, brown, yellow and to a lesser extent red. The blacker the horn the more expensive it will be, by extension, the lighter the colour, the cheaper it is. Looking at the cross section of a rhino horn, the most precious part is in the centre, where it appears to be very dark or even pure black (sometimes referred to as 'meat'), and gradually fades into brown, red, and yellow or even white until the outer ring where the skin grows.

¹⁴ Emslie, R. and Brooks, M. (1999) African Rhino. Status Survey and Conservation Action Plan. IUCN/SSC African Rhino Specialist Group. IUCN, Gland, Switzerland and Cambridge, UK

The tip is the most expensive part of the horn overall because this is where the energy of the rhino is believed to be concentrated. Moreover, due to its shape the tip is considered to hold greater artistic value. This part is estimated to weigh between 500-1000 grams, and is valued between USD 25-30,000.

Lastly, the price of the horn and horn products is influenced by whether it concerns/ derives from the first horn (the front horn) or the second horn (back horn) of the rhino. The first horn is generally sold at a higher price than the second horn (Table 6 & 7).



IMAGE 1: Carved Rhino Horn Pieces, Offered in May 2016



IMAGE 2: Carved Rhino Horn Pieces, Offered in May 2016

Historically, the geographical origin of the horn (African or Asian) similarly resulted in a difference in value. Specifically, in Taiwan, pharmacists surveyed in the 90's, stated that Asian or 'fiery' rhino horn was more potent and effective than its African 'water' counterpart, which was in particular reference to its medicinal properties. Due to the limited number of Asian rhinos across their range in comparison to African rhinos, Asian rhino horns are rarer in trade and subsequently more valuable. For example, during a survey in 1991 African rhino horn stocks in Taiwan were estimated to be 29 times higher than those of Asian rhino horns and as such the retail price of 'fire' horn was between five and nine times greater than 'water' horn¹⁵.

During our investigation, little or no reference was made to the species of rhino the horn originated from, which could be due to a combination of the following two reasons. Firstly, the current investigation took place 25 years after the survey described and there are far fewer Asian rhino horns in circulation today. Secondly, the current investigation highlights the paucity of rhino horn products observed in trade for medicinal use and therefore any demand and preference for 'fiery' horn was not relevant.

Market to Consumer

The rhino horn trade operated by the criminal network observed in our investigation appears to cater almost entirely to Chinese nationals. During the investigation, Vietnamese traders used Chinese terms in relation to illicit trade. Rhino horn was often referred to as Hei Huo (black product), while ivory is known as Bai Huo (white product).

Family ties in the cities of Mong Cai, Viet Nam and Dongxing, China, extend the network's reach and customer base with goods from Nhi Khe smuggled to buyers in China. The smuggling of goods into China from Viet Nam occurred frequently but only for certain routes. However, for buyers willing to purchase in great volume, traders would identify contacts through the wider network who could facilitate this.

The Chinese government's clampdown on the illegal wildlife trade is suspected to be one causal reason why illegal wildlife trade is prevalent in Viet Nam. While Vietnamese subjects on interest were in China we noted reluctance to use WeChat to trade illegally, whereas in Viet Nam this fear was far less pronounced, almost non-existent. This is perhaps further corroborated by the amount of open trading taking place on Facebook in Viet Nam.

¹⁵Ibid.

Indications that the Nhi Khe network primarily focused on supplying rhino horn products to Chinese clientele include; 1. that prices were principally quoted in Chinese Renminbi and 2. the significant, enabling role of WeChat. WeChat was the most popular social media platform and was used by one third of traders. During our one-year investigation we detected at least 8,300 images of illegal wildlife for sale on WeChat.

*Furthermore, we found that bank accounts held in China were used by Vietnamese subjects to receive payments from Chinese buyers, **thus facilitating money laundering** and the movement of significant illicit financial flows. In addition, observations were made of Chinese customers using WeChat Wallet to transfer funds to their Vietnamese suppliers. The ramifications of the emergence of this new trend for countries in their attempts to counter money laundering remain to be seen.*

By using Chinese financial institutions to accept payment the traders are effectively circumventing Viet Nam's financial monitoring systems. It was not identified how this money makes its way to Viet Nam, but on one occasion a suspect provided the bank account details and explained the account belongs to someone who would convert the Yuan into Vietnamese Dong on his behalf. The payment of purchased goods to bank account holders appeared to mainly occur through third parties.

We noted geographical preferences as to where traders are willing to arrange delivery into China. Delivery to the Chinese province of Guangxi was frequently offered, specifically to the border towns of Pingxiang (often referred to as Puzhai) and Dongxing. Dongxing is a county-level city of Guangxi, China, on the border with the Vietnamese town Mong Cai. Moreover, Mong Cai has been identified in several reports undertaken by other NGO's as a major illicit transit point for wildlife products entering China from Viet Nam and this gateway was identified as a persistent entry point corroborated during the investigation. The investigation identified the strong likelihood that corrupt Vietnamese border officials at the Vietnam-China border points are facilitating the movement of illegal wildlife products into China.

Many traders referred to the guaranteed hassle-free route into Guangxi province, China via the infamous Friendship pass. The most protected mode of transport for this was by land. When questioned about delivery to other provinces in China, some advised they could pass your details to a contact who could facilitate this, while others were reluctant to engage in this, revealing their impunity only applies in Vietnam and at the border with China.

Map 1 highlights that two Chinese provinces border Viet Nam, while delivery to the Chinese province of Yunnan was never offered.

MAP 1: CHINESE PROVINCES CLOSE TO THE VIETNAM BORDER



© 2017 Wildlife Justice Commission.

Various methods are in play in relation to cross-border trade dynamics servicing Chinese customers in Viet Nam:

- *Larger quantities of contraband mean greater profits and this was used as a bargaining tool when clients required timely deliveries;*
- *The bigger shops in Nhi Khe employed couriers to deliver goods to the Viet Nam/Chinese border (Pingxiang or Dongxing) or for a greater fee to anywhere in China. It is suggested the goods are carried overland, or in a vehicle;*
- *Some traders would post items and it is likely this generally occurs for smaller items;*
- *Little information exists in relation to goods being taken into China by air.*

While gathering information from traders themselves, our investigators made observations about customers at the shops in Nhi Khe. While some customers were believed to be tourists shopping for small items, others were found to be Chinese businessmen in Nhi Khe looking to purchase products at wholesale for their retail business in China. One stated reason why customers choose to shop in Nhi Khe, was the guaranteed impunity comfortably offered by Nhi Khe based traders.

Criminal Base

Demographically, the village of Nhi Khe's population is modest, estimated to consist of around 600 families in 2016¹⁶. Most of the families work in the traditional handicraft business, which signifies how culturally embedded this industry is.

The 2015 investigation uncovered 33 subjects found to be engaged in illegal trade, with an additional 18 subjects identified in 2016. The 2016 investigation found evidence that 14 of the original 33 subjects continued to remain actively engaged in illegal trade. The exact proportion of villagers suspected to be involved in the (facilitation of) illegal wildlife trade is not known, however, given that evidence was collected against 51 subjects across a population of 600 families, it is expected to be substantial.

*The greater volume of trade observed in 2016, in comparison to that in 2015, reflects the offenders we chose to target in 2016. The WJC use an internal subject risk assessment which is based on several criteria to measure the impact of offending upon conservation efforts and to classify their roles and available resources. This method assists in an **assessment of the level of threat, harm and risk posed** by each individual. As such, we were able to focus on subjects suspected to be heavily involved in illegal trade during the latter stages of the investigation. Accordingly, we were exposed to more **prolific offenders**. To further illustrate, the total monetary value of rhino horn, both raw and worked products in trade for the entire investigation equated to USD 42,700,000, of which USD 4,009,413 was observed in 2015 and USD 38,690,587 (91%) was observed in 2016.*



IMAGE 3: Square base of a whole rhino horn

Monitoring of social media accounts found that traders identified earlier in the investigation had ceased trading via their WeChat or Facebook accounts or had become inaccessible. Moreover, many of the premises identified in 2015 were not visited in 2016, therefore it is possible trading at those sites may have been ongoing.

¹⁶ <http://www.baomoi.com/suc-song-cua-lang-nghe-nhi-khe/c/19136152.epi>

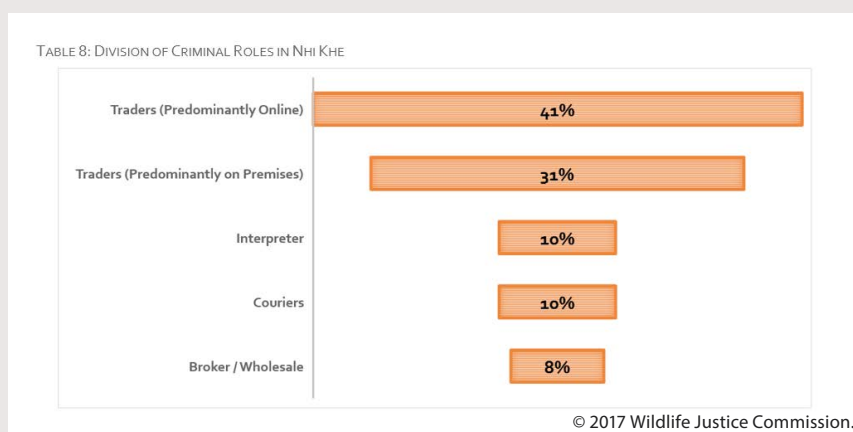
While the overall coordination of the network is not yet clear, or whether indeed, the network even functions as one organisation cannot be confirmed. A closer examination of subjects and their associates indicates some closer relationships as well as subjects deemed to be of greater interest. It is suggested that some level of homophily is in play across this network of 51 subjects. This is to say that actors are linked because they share similar characteristics, such as resources, geography and behaviour which could hold great meaning for the context in which the crime occurs in Nhi Khe and how prevalent it appears to be¹⁷.

WeChat (51%) and Facebook (20%) were found to be the chosen social media platforms for conducting illegal wildlife trade. While some subjects used both platforms (10%) to advertise their products, preferences were identified in terms of which social networking site was used. This may be an indication of their targeted market, given that Facebook is far more popular in Vietnam (and not available in China), whereas WeChat is a Chinese platform. Analysis of the estimated profits generated finds that catering to a Chinese clientele likely yields creates greater returns in comparison to Vietnamese customers.

The different roles of each of the 51 identified persons of interest were determined as well as their chosen method to trade. As expected, most fulfilled the roles of sellers and traders (Table 8), and this varied in terms of the volume and breadth of species they trade in. As suspected, not all actors assume the same role or have the same level of power and to fully understand how this can be translated Social Network Analysis (SNA) was undertaken¹⁸. SNA provides a method to aid understanding of networks and is particularly relevant for understanding operational aspects of a criminal network, to determine hierarchy and dynamics.



IMAGE 4: Libation Cups Offered on WeChat, October 2015



The Connecting Role of the Translator

Our investigation found that interpreters played an integral role to the success of the overall operation and as such were a central enabling factor in Nhi Khe. Of the 51 persons of interest subject to the investigation, five (10%) were identified as fulfilling the role of a Chinese interpreter, all of which were female Vietnamese nationals who typically accompanied Chinese customers to the village. Day rates for translators were quoted at 150 RMB [USD 22].

¹⁷McPherson, M., Smith-Lovin, L. and Cook, J.M. (2001). 'Birds of a Feather: Homophily in Social Networks'. Annual Review of Sociology. DOI: 10.1146/annurev.soc.27.1.415

¹⁸ Clifton, K.L. and Rastogi, A., (2016). Curbing Illegal Wildlife Trade: The Role of Social Network Analysis. IUCN

The interpreters facilitated meetings and transactions by assuming the role of central communicators. They escorted clients to the village to view products and helped to negotiate prices. They were found to have good access to other parts of the network and therefore to have much greater visibility across the network. SNA analysis finds that four (8% of the criminal base) of the interpreters¹⁹ were found to be linked to 40% of the remaining network. The removal of such players is likely to disrupt illegal activity.

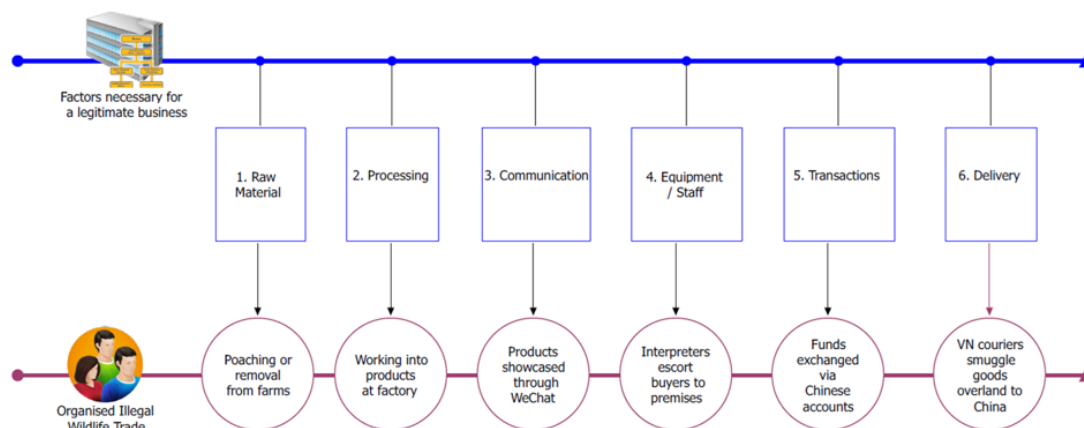
One Vietnamese interpreter was assessed to have the second greatest percentage of ‘closeness’ to the rest of the network. Such individuals are important as they are deemed to be ‘closer’ to other subjects and are able to reach others in the network at shorter path lengths. Due to the unique role played by the interpreter, they should be considered influential key subjects for future targeting to maximise intelligence-led operations. Previous research has shown that the application of this form of analysis increased the fragmentation of a network by 63% and allowed for the identification of actors who had links to 80% of the network²⁰. It is assessed that translators intrinsic to the criminal network identified have a similar level of coverage.

Indications of a Criminal Enterprise

Certain aspects of the way in which illegal trade occurred in the village are synonymous with that of a criminal business and demonstrates how Nhi Khe operations are consistent with that of a legitimate business (Chart 2), from acquisition to customer delivery, mirroring stages of a legitimate business. A successful business needs to be able to adapt to change, and subsequently we found business operations in Nhi Khe were able to cope with the threat of law enforcement inspections. The impact of increased enforcement presence in the village led to displacement of trade to outlying areas close to Nhi Khe. As such, four new locations of interest were identified as being used to store illegal wildlife goods and to facilitate alternative meetings with prospective clients where they may run the risk of detection at locations within Nhi Khe. In turn, this adaptability to change indicates an element of organised criminality, given the ease in which access to other facilities and therefore other resources could be secured. Furthermore, to aid the success of an illegitimate business it is necessary to operate a legitimate business to assist in the ‘laundering’ of illegal goods. In Nhi Khe, many of the shops trade in timber or rosewood products and this may facilitate the smuggling of illegal products into China, due to the existence of shops in China close to the Vietnamese border, such as Guangxi for example. It is inferred that their business bank accounts are used for legitimate timber transactions and therefore large deposits (for illegal products) may not arouse suspicion. At least four of the 16 shops trading in rhino horn, also trade in rosewood and / or timber products.

CHART 2: STAGES ACROSS THE TRADE CHAIN

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¹⁹The fifth interpreter was not found to be linked to any other person of interest during the investigation

²⁰ Schwartz, D. and Rouselle, T (2009). Using social network analysis to target criminal networks



IMAGE 5: Rhino Horn
Libation Cups on Scales



IMAGE 6: Rhino Horn
Libation Cups on Scales



IMAGE 7: Rhino Horn
Libation Cups on Scales

- *Discounts offered if higher quantities of goods are purchased in bulk;*
- *Deposits paid up front (mainly quoted between 20-30%);*
- *Refunds offered if the shipment is intercepted by enforcement agencies;*
- *Clear roles of individuals along the chain facilitating the movement of goods from source to consumer;*
- *Use of international bank accounts.*

Given the sheer volume of rhino horn parts and products observed in trade, it is not surprising that associated paraphernalia and tools were used in advertisements and during negotiations (Images 8-10).



IMAGE 8: Whole Rhino Horn,
Weighed and Measured



IMAGE 9: Whole Rhino Horn,
Weighed and Measured



IMAGE 10: Whole Rhino Horn,
Weighed and Measured

Displacement

The displacement of crime is an important principle of crime science. Implications of displacement may undermine efforts to tackle a given issue if measures are not put in place to consider its impact. During the investigation, geographical displacement was observed.

The way in which crime was conducted altered from an open market model seen in 2015 to a more traditional crime model during the latter part of the investigation in 2016. It appeared that increased enforcement presence led to displacement of trade to villages nearby Nhi Khe and north of Hanoi, and traders became more vigilant of their activity and took fewer risks. In 2016, four new locations were identified as being used to sell or store illegal goods and to facilitate alternative meetings with prospective clients. This shift in geography also highlights the availability of other resources available to certain members of the network. Interestingly, while trade appeared to be conducted less overtly in comparison to 2015, the volume of trade observed in 2016 was far greater, and is a subsequence of internal targeting of high-level offenders.

Corruption and Competition

Traditionally, law enforcement efforts are believed to create some form of deterrent effect for other actors operating in the same field. Yet in Nhi Khe, it appeared to achieve an opposite effect. A major broker discussed the recent arrests of other subjects in Nhi Khe, during a meeting with undercover investigators, and stated it was good for business. Unlike other environments, where law enforcement action is perceived as a threat to the criminal, in a corrupt environment it acts as an essential facilitator of the crime.

POI 41 Arrests are good. Less competition!

WJC You get more business

POI 41 Too many people do this now

WJC Have you been arrested in Vietnam?

POI 41 No

WJC Not arrested

POI 41 My connections in Vietnam are good I won't get arrested.

WJC Really? You have good connections with the police

POI 41 Yes

WJC I hear they arrested some people. Their connections weren't as good

POI 41 They arrested small folk

It is likely that this situation in Nhi Khe, where many actors are involved in the illegal wildlife trade and played similar roles, may have been influenced by an undertone of competition. This assumption is supported by an observed variance in prices (Table 6 & 7).

CONCLUSION

The situation we witnessed in Nhi Khe is a unique one, which may be replicated in other locations across Viet Nam, albeit, to a much lesser extent. The market appeared to be dictated by a drive to supply Chinese clientele, particularly, with worked rhino horn products. Although Viet Nam is known to be a primary destination for rhino horn, it is also clearly a highly significant transit area for products ultimately bound for China. Research that has relied on a review of trafficking patterns may have overstated the significance of the domestic Vietnamese market.

*In contrast, and unexpectedly, **any appetite for rhino horn for medicinal purposes did not materialise**. Of over 8,000 images that we documented during the investigation, less than five featured offcuts of rhino horn. Consideration may need to be given to the over-representation of a Chinese market due to the use of covert investigators of Chinese ethnicity, consequently neglecting any Vietnamese element of the market. However, given the volume of products documented during the investigation, estimated to be worth USD 42.7 million, and likely to account for a substantial proportion of the rhino horn market, the vast majority of which was found to be aimed at Chinese nationals.*

At the micro level, the occurrence of crime relies on two factors: the presence of at least one motivated offender, and here we refer to the craving for endangered wildlife products and the high-value it fetches and secondly the conditions of the environment in which that offender is situated. The historical setting of the village provides a strong environmental foundation due to its reputation as the 'go to' location for expert carvery of timber and other high-value materials. This assisted in the transition from licit to illicit trade as the village already possessed the necessary skill set that the market desired. The estimated high proportion of Nhi Khe residents engaging in illegal wildlife trade may mean this form of criminality is normalised in the village.

The volume and therefore prevalence of wildlife trade in the village is supported by the following situational factors:

- the role of the translators (*enabling communications*);
- the geographical proximity of Nhi Khe to the Chinese border (*reducing effort required from the offender, both buyer and seller*);
- connections to shops in China owned by Vietnamese nationals associated by family connections to subjects in Nhi Khe (*legitimatising the transport of goods*);
- the utilisation of a Chinese social media platform (*not currently monitored in Viet Nam*);
- the use of Chinese accounts by Vietnamese nationals (*circumventing Vietnamese financial monitoring systems*).

Offenders engaging in crimes with a monetary outcome are seeking financial gains which are greater than the personal costs to them²¹. Their assessed personal costs may include effort, time and risk, given the above factors, it is surmised that effort required from the offenders in this situation is therefore low. Their motivation, however, by the prices paid for illicit wildlife goods outweighs the personal risk. We found the lack of suitable guardians or in this case, the absence of effective law enforcement intervention a crucial enabling factor. Subjects alluded to the protection they operated under and it is suspected that situation was not unique to one or two individuals. Corruption continues to be a significant influencing factor facilitating illegal wildlife crime across all parts of the trade chain²². Without truly tackling this issue, the situation is likely to persist.

²¹Van Dijk, J.M.J. (1994). Understanding Crime Rates. Brit. J. Criminol. Vol. 34

²²https://www.unodc.org/documents/data-and-analysis/wildlife/World_Wildlife_Crime_Report_2016_final.pdf

WIDER CONSIDERATION

Demand for wildlife in consumer states is a social problem that requires a multi-faceted solution. One aspect of which must incorporate social science based solutions such as behavioural change²³. While such initiatives are already underway in Viet Nam most have been seeking to reduce demand for endangered animals for medicinal purposes, and may fail to consider the emerging, yet popular use of rhino horn as items of jewellery, libation or tea cups in China.

²³Duncan Graham-Rowe (2011). Biodiversity: Endangered and in demand. Nature 480 S101–S103

Appendix I

Methodology

During the investigation, a range of methods was used to capture, manage, and analyse information, with the aim of producing an evidential case file that would support law enforcement action by relevant law enforcement authorities:

- Internet research was conducted to identify available information on the illicit wildlife trade in Nhi Khe and to understand the wider context of illicit wildlife trade in Viet Nam;
- Analysis of Viet Nam's legal framework was conducted to identify relevant criminal statutes;
- Six covert field investigations were undertaken in Viet Nam (July, September and October 2015, March and June 2016) and one in China (September/October 2015). Evidence of illegal sales and conversations with traders were captured using covert recording equipment. The WJC mimicked what they saw in the trade and used Chinese investigators posing as potential buyers from China;
- Facebook and WeChat accounts of identified subjects were monitored to detect possible illegal advertisement and sales of wildlife, map out connections between members of the network and their lifestyles. In addition, key traders were engaged in covert conversation on WeChat to obtain evidence of their involvement, including trafficking methods used and commodities offered for sale.
- All evidence obtained, including open source research reports, observation reports, investigative reports, as well as expert witness statements were uploaded in WJC's case management system and given unique reference numbers.
- Expert witness statements were obtained from forensics experts based in the US and The Netherlands to assess the origin of a rhino horn offered for sale in Nhi Khe and to verify the authenticity of ivory items, tiger canines and tiger bones offered for sale on WeChat.
- The information obtained during the investigation was analysed using IBM's i2 Analyst Notebook software. Social Network Analysis testing was used alongside existing Analyst's Notebook functionality to help examine and analyse group structures.
- Due to the lack of published research on the quantification of rhino horn parts and products in the illegal market a methodology was developed to estimate the volume and value of rhino horn observed for sale on WeChat and Facebook, in Nhi Khe and associated locations. Examples are given below to outline different formulas used in the calculations. For each of the processed product types average prices were calculated using prices quoted by traders in Nhi Khe and on WeChat. Quantities were recorded in the unit of Kilogram (kg). Where commodities were listed in grams or 'taels', they were converted to kg to facilitate calculations. In Viet Nam, 1 tael represents 100 grams.
- The prices quoted were recorded in the currency that was originally given by the seller, in Chinese Renminbi (RMB), and / or in Vietnamese Dong (VND) and uniformly converted to United States Dollar (USD) using currency converter www.xe.com.

The following calculation was used to extrapolate from rhino horn quantities observed for sale to an estimated number of animals:

- Raw horn: in the 2015 investigation, only front horns were observed, therefore one rhino horn or rhino horn tip was taken to represent one rhino. During the 2016 investigation, several back horns were observed in addition to front horns, one rhino horn or rhino horn tip was considered to represent a minimum of half a rhino, and a maximum of one rhino.
- For processed rhino horn products, the total weight recorded was divided by 2kg, which was the average weight of rhino horns observed in this investigation.

The average weight per product

The average weight per processed product type (e.g. bangles, cups, pendants, raw horn) was obtained by recording the weight and number of products that were weighed on a scale, as was commonly conducted in WeChat advertisements. By dividing the total weight by the number of the products, an average weight per unit for each product type was obtained. In cases where the weight of products was not clearly indicated, the number of pieces was recorded and multiplied by the average weight per unit of that processed product, which resulted in an estimated total weight.

For example, if during the investigation, we documented five individual weights of libation cups offered for sale; 0.16kg, 0.03kg, 0.06kg, 0.04kg and 0.05kg respectively. An average of those five weights would be calculated, therefore the average weight for one libation cup is considered as 0.068kg²⁴.

This calculation was applied to each type of processed product type we observed in trade and is outlined in Table 1.

TABLE 1: CALCULATED AVERAGE WEIGHT PER PART / PROCESSED UNIT

Rhino Horn Part / Product	Weight Per Unit
Raw horn: 2kg	2kg
Bracelet / bangle	0.055kg
Pendent	0.012kg
Beads	0.002kg
Libation cup	0.067kg

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Determining the price of products based on weight

For products where a price per kg was quoted, the price per kg was recorded. For products that were weighed, and were offered for sale with a price per unit, the price was converted to price per kg, and recorded. For those products that were offered for sale with a price per unit only, the average weight of such products obtained from quantity calculations were adopted to convert the price into price per kg, and then recorded.

For example, if one libation cup was offered for sale at the price of USD 70,000 per kilo, USD 70,000/kg is recorded; if one libation cup weighing 0.1kg was offered for sale at the price of USD 7,000, USD 7,000 would be divided by 0.1kg which equals to 70,000, USD 70,000/kg is then recorded; if a libation cup of unknown weight was offered for sale at the price of USD 5,000, USD 5,000 would be divided by 0.068kg, the average weight of a libation cup, which equals to 73,529, USD 73,529/kg is then recorded²⁵.

The average price per products

The average price per product type (e.g. bangles, cups, pendants, raw horn) was obtained by recording the prices and the weight of the products. By dividing the total prices into the total weight, an average price per kilo for each product type was obtained. In cases where the price of the products was not clearly indicated, the weight of the products was recorded and multiplied by the average price per kilo, which resulted in an estimated total price for the products.

²⁴For illustrative purposes only

²⁵For illustrative purposes only

For example, if three libation cups weighing 0.1kg, 0.08kg and 0.05kg were offered for sale at the prices of USD 5,000, USD 4,500 and USD 3,800 respectively. Dividing the total prices (USD 13,300) by the total weight (0.23kg) of all three libation cups, which equals to USD 57,826. USD 57,826/kg is then recorded as the average price per kilo for libation cup.

The WJC documented almost all pictures posted by the 51 persons of interest on WeChat and Facebook concerning the sale of products derived from protected wildlife species during the monitoring period. Each picture was assigned a unique reference number and was included in an image index. To avoid the risk of calculating the same product more than once time during the monetary valuation and quantity calculations, due diligence was undertaken to ensure that the same product shown in multiple pictures was counted only once. Similarly, duplicate images were removed from the count.