A Preliminary Analysis of Raw Rhino Horn Prices in Africa and Asia
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The Wildlife Justice Commission (WJC) was established in March 2015 with the goal of disrupting and helping to dismantle transnational organised criminal networks trading in wildlife, timber and fish. Our first investigation, Operation Phoenix, revealed a major criminal network involved in the trafficking of body parts and derivatives of several CITES Appendix I listed species such as elephants, rhinos and tigers and centred upon the small village of Nhi Khe, Viet Nam.1 The dynamics of rhino horn trafficking in Nhi Khe and an analysis of raw rhino horn were later presented in the WJC’s Black Business2 report published in September 2017.

The WJC continued monitoring and recording price data for illegal wildlife products in addition to rhino horn. The recording and analysis of commodity price data is of great value, both internally for the WJC as we seek to tackle transnational wildlife crime; and externally, as our assessment can also offer real insight to inform government agencies. The data analysis allows us to monetise wildlife crime by attaching a value to commodities in trade, while allowing for an estimation of the potential profits of wildlife criminals. The amount of generated profits could be an indication whether any additional criminal offences, such as money laundering, are committed by those individuals. Documenting this process and disseminating this information to law enforcement agencies could assist in the initiation of additional financial investigations.

Current and properly documented price data also holds huge value beyond our investigations. It assists in the understanding of the dynamics of illegal wildlife trade, including consumer and market characteristics, differences of price levels between retail and wholesale, and assigns value to products in the current market. With this, the fluctuations of prices and demand within the market can be monitored.

To determine whether any changes have occurred concerning the value of rhino horn specimens, and whether these possible changes are of significance to the trafficking situation, we conducted a preliminary analysis on the current price data further collected by our investigators across several operations.

Key Findings
Current price data obtained between January 2017-July 2018 finds that the price per kilo of raw rhino horn in Africa is 50% lower than the price demanded in Asia.

Based on results obtained from the WJC Operation Phoenix conducted between July 2015-August 2017 and the analysis of raw rhino horn prices featured in the report Black Business, the average price per kilo was calculated to be around USD 26,653. This figure was found to be substantially lower than the commonly cited value in the media that raw rhino horn is worth USD 65,000 per kilo.

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1- The key findings of the WJC’s Operation Phoenix are detailed on a briefing document available at www.wildlifejustice.org
2- Available at www.wildlifejustice.org
As expected, based on prices solely for raw rhino horn, this report indicates that the average price for raw rhino horn is significantly lower in Africa. This highlights the fact that within wildlife trade, just as in other illegal transnational trafficking, the product on offer will be more expensive along the chain towards the end user.

Methodology
- Because prices are influenced by variables within the processing chain (e.g. the expertise of carvings), only the prices for raw rhino horn materials are being described.
- Crude analysis was based on the current prices for rhino horns obtained during our investigations. No analysis was done on any motivations causing price changes.
- Products in Asia were found to be offered in different quantities. In order to obtain a uniform average, all quantities were converted into kilos.
- Prices in national currencies were converted into United States Dollar (USD), using www.xe.com, based on the exchange rate on the date when the products were recorded by the WJC.
- When engaging with sellers, the WJC investigators claim to be buyers originated from China. This concerns prices obtained via direct observation as well as via online social media platforms such as Facebook, WeChat and Instagram.
- Products and prices were observed directly and via social media, see table 2.

Table 1. Average prices for raw rhino horn (USD)

<table>
<thead>
<tr>
<th>Continent</th>
<th>Average price per kilo</th>
<th>Trendline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>17,852</td>
<td>Decline</td>
</tr>
<tr>
<td>Africa</td>
<td>8,683</td>
<td>Decline</td>
</tr>
</tbody>
</table>

Table 2. Methods of trade

<table>
<thead>
<tr>
<th>Method</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>31</td>
</tr>
<tr>
<td>WhatsApp</td>
<td>2</td>
</tr>
<tr>
<td>WeChat</td>
<td>7</td>
</tr>
</tbody>
</table>

Since then, our investigators have continued operations across Africa and Asia and have been offered rhino horn materials on several occasions and locations. Other investigations in Southeast Asia conducted from January 2017 until July 2018 after the investigation in Nhi Khe, found the average price of raw rhino horn to be around USD 17,852 per kilo (Table 1). This is a 33% drop in value in comparison to the average value calculated during Operation Phoenix. This decrease corroborates earlier findings that indicated an overall observed declining trendline in relation to the value of raw rhino horn.

In addition, prices were collected from several locations in Africa between March 2017 and June 2018. The price for raw rhino horn ranges from USD 3,604 to USD 17,000 per kilo, calculated to equate to an overall average of USD 8,683 per kilo. Although the total number of data points is limited, the trendline based on these prices also shows a decline (see table 1).
RESULTS: ASIA

Following Operation Phoenix, we continued to monitor and collect prices for raw rhino horn in four countries in Asia. Our investigators observed and were offered raw rhino horn (whole and pieces) on 24 occasions between 1 January 2017 and June 2018. The prices ranged from USD 7,500 to USD 31,296 per kilo, which equates to an average price of USD 17,852 per kilo. This is substantially lower compared to the average price found in Nhi Khe from June 2015 until August 2017 (USD 26,653 per kilo / 33%).

When combining the prices from the investigation in Nhi Khe with the prices obtained in investigations, taken from the first data point in July 2015 until the latest data point in July 2018, the linear trendline based upon the prices for three years raw rhino horn in Asia shows a decline (see chart 1). This illustrates that after Operation Phoenix the prices continue to decline.

Chart 1. Raw rhino horn prices per kilo in Asia between July 2015-July 2018 (USD)
RESULTS: AFRICA

In Africa raw rhino horns (whole and tips) were offered and observed on 16 occasions between March 2017 and June 2018. The price for raw rhino horn ranges from USD 3,604 to USD 17,000 per kilo with the average calculated price during that time period equating to USD 8,683 per kilo. This is a significant difference from the average price found in Nhi Khe from June 2015 until August 2017 (USD 26,653 per kilo) and in Asia from January 2017 until July 2018 (USD 17,852 per kilo). Moreover, the linear trendline for prices of raw rhino horn in Africa, show a steep decline, see chart 2.

Chart 2. Raw rhino horn prices per kilo in Africa between March 2017-June 2018 (USD)

Conclusion

We note a 33% decrease in value of raw rhino horn during the last three years (2015-2018) in Asia, with average prices estimated to be around USD 17,852 per kilo. A parallel trend has also been observed in relation to the value of raw ivory.3

While this preliminary analysis allows for the identification of some crude comparisons between the current value of raw rhino horn in Africa and Asia, it does not yet allow for a meaningfully analysis of long-term trends or influencing factors driving changes in the market.

This data capture will form the basis of such analyses that the WJC will undertake in the future and report on as part of its continued fight to tackle transnational organised wildlife crime.

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