

## KEY points:

- This study identified 112 keywords that were used by dealers to avoid detection by website and government monitors, with 40 keywords used for ivory and 15 for rhino horn.
- During 2012 to 2016, 63.2% of new monthly wildlife product advertisements were for ivory products. This was followed by rhino horn products, accounting for 18.1% of all wildlife advertisements.
- Overall, new monthly wildlife product advertisements decreased between 2012 and 2016. By December 2016, the number of new monthly wildlife product advertisements was less than 1000.
- Some wildlife product dealers continue operating, even though they have been punished by government enforcement departments and had their accounts deleted by social media operators.
- Through social media channels, dealers earlier in the trade chain (smugglers, wholesalers and manufacturers) can more easily reach end consumers, which can stimulate the smuggling and consumption of illegal wildlife products.
- Social media is the main channel for illegal wildlife trade online, but product advertisements on websites (such as e-commerce websites) and other public sources remain important as platforms for outreach and to attract new audiences, eventually to pull interested buyers towards more private conversations on social media.
- In addition to ivory and rhino horns, the illegal trade of other types of wildlife, such as Tiger parts, Helmeted Hornbill casques etc. should be given greater attention by government, e-commerce companies and conservation NGOs.
- Website operators need to enhance their awareness of relevant legislation and address the posting of unverified wildlife products for sale appropriately and in a timely manner.

## BACKGROUND

TRAFFIC revealed in 2015 that China's e-commerce platforms have become major channels for the sale of illegal wildlife products, with more than half of the trade involving elephant ivory items (Xiao and Wang, 2015). The 2015 e-commerce monitoring report attracted widespread attention from Chinese government agencies, as well as e-commerce and social media companies. E-commerce, which is based on marketing through readily accessible internet websites, is far more visible and easier to monitor than social media platforms that generally operate on an exclusive "invitation only" basis beyond the view of anyone not part of the immediate group. Consequently, illegal wildlife trade has come under better control after major e-commerce platforms took actions to remove endangered species advertisements routinely. However, the trade has subsequently shifted to more active social media platforms, causing an overall rise in online sales of illegal wildlife products (TRAFFIC, 2016). To provide stakeholders with greater details about illegal wildlife trade via social media channels, TRAFFIC released a specific monitoring report in November 2015 that assessed observations of 58 social media accounts during May–July 2015 (Guan and Xu, 2015). The findings in this report suggest that sales of illegal wildlife products were extremely worrying, with ivory products alone being offered in over 10 000 online social media postings.

In China, all species protected by international and national law cannot be traded online, even if some of these products can exceptionally be sold legally in regulated physical markets. To address the new challenges of online wildlife cybercrime, related laws and regulations were reviewed. China's revised *Wild Animal Protection Law* ("the Law"), which came into effect on 1 January 2017, aims to fill any regulatory loopholes with respect to wildlife trade online, particularly through Articles 31 and 32 which clearly stipulate the prohibition on online advertising in relation to the sale, purchase or utilization of wildlife or prohibited hunting equipment; and the prohibition on the provision of online trading platforms, exchange markets or other online trading space for the illegal sale, purchase or utilization of wildlife and products thereof or prohibited hunting equipment (Xinhuanet, 2016). At the international level, the 17<sup>th</sup> meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES CoP17) adopted a resolution on *Combating Wildlife Cybercrime* which urged Parties to submit information to the CITES Secretariat that could improve mechanisms and regulatory measures designed to crackdown on wildlife cybercrime (CITES, 2016). To address the illegal sale of ivory products, which accounts for half of the wildlife cybercrime market in China, the General Office of the State Council released a *Notice on Phased Suspension of Processing and Sales of Ivory for Commercial Purposes* (GOV.CN, 2016) ("the Notice") on 29 December 2016, a programmatic plan to terminate all commercial processing and trade of ivory, strengthen law enforcement, monitoring and advocacy, and eliminate trading networks including markets on- and off-line. The online illegal ivory trade will be irrevocably affected by the ivory ban and related announcements.

Two years have passed since TRAFFIC's previous reports on China's wildlife cybercrime. This briefing aims to assess the current situation and new developments on this important issue. This research is also necessary to determine if there are any new

trends in online illegal wildlife trade. This study is not only a review of the online illegal wildlife trade between 2015 and 2016, but also serves as a benchmark for future evaluations of progress in implementing the Law and the Notice.

## SURVEY METHODOLOGY

This study is based on data collected by TRAFFIC from January 2012 through December 2016 as part of its programme of monthly e-commerce monitoring for illegal wildlife trade.

### Websites, including e-commerce platforms:

TRAFFIC’s methodology was the same as that used in previous e-commerce surveys, which is based on the routine monitoring of selected Chinese websites by searching keywords for specific illegal wildlife products and recording the number of new wildlife product advertisements every month; (unless otherwise noted, “advertisements” hereinafter refer to “new wildlife product advertisements” i.e. advertisements which were not previously recorded during TRAFFIC’s website-based monitoring). Automated search software was employed for greater efficiency. The survey records the number of advertisements rather than the number of illegal products, because it is very difficult to identify the actual number of products being sold through photo images in the advertisements. The survey workflow also varied depending on the type and underlying processes of each website:

1. Target advertisements were searched automatically by software and then screened manually. Irrelevant and fake product information was filtered. This approach is applicable to websites offering large volumes (more than 50 advertisements) of illegal trade information.
2. Manual searches were used for websites offering smaller volumes (between 0–50 advertisements) of illegal trade information.
3. Site-specific manual searches were also used on websites without an internal search engine which could not be searched automatically.

The search terms employed covered the most common species in illegal wildlife sales in China, including products of elephants, rhinos, Tigers, sea turtles, pangolins, leopards, Helmeted Hornbills, Saiga Antelopes and whales. As of December 2016, the search vocabulary had 112 keywords (including code words) in total, including 40 for ivory products, 15 for rhino horn, 12 for Tiger, eight for sea turtle, eight for Helmeted Hornbill, seven for pangolin, five for Saiga Antelope, five for whale, three for leopard, and nine for all species in general.

The scope and depth of the survey has continually expanded through the addition of new websites. The number of websites that are routinely monitored reached 31 by December 2016. Changes in the number of keywords, websites monitored, and species over time are illustrated in Figure 1.

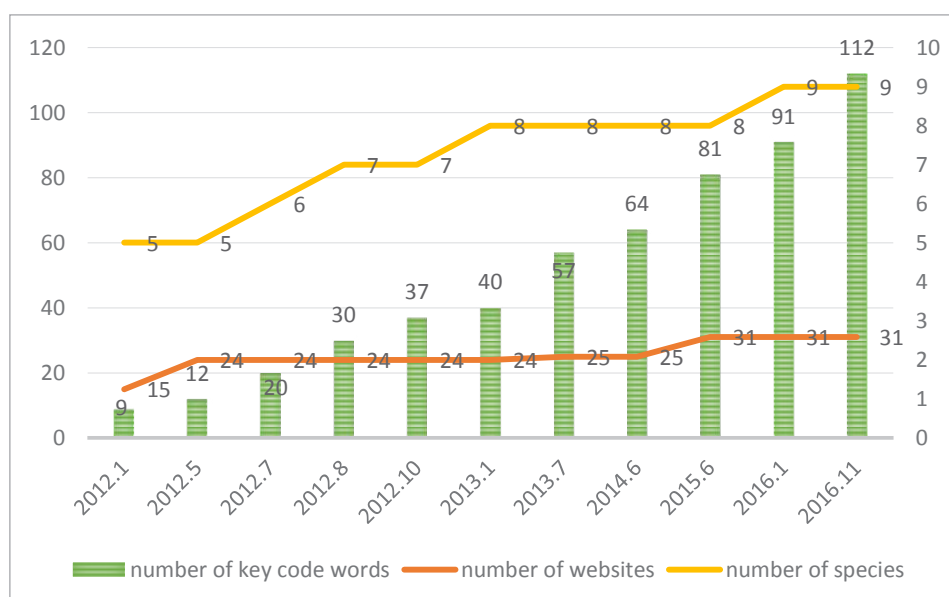


Figure 1. Change in surveyed species, keywords and number of websites (2012–2016)

The biggest challenge for website monitoring is to judge the authenticity of wildlife products from photos in advertisements. Although it is very difficult for website visitors to determine whether an advertised product is genuine only from pictures and simple descriptions online, dealers often try to convince potential buyers that “seeing is believing” by showing detailed product characteristics, e.g. ivory texture in high definition photos or composition tables of Tiger bone wines, which provide a good basis for TRAFFIC researchers to judge the advertised products accurately.

## Social media survey on ivory

The present research applied the same survey methodology that was used in TRAFFIC’s 2015 report on social media monitoring. TRAFFIC researchers reviewed all information posted in a 24-hour period on five occasions during May–July 2016, on the same 58 social media accounts surveyed in 2015. The survey identified valid ivory product advertisements and recorded all contents including descriptions, number of images and videos, type of products, and price.

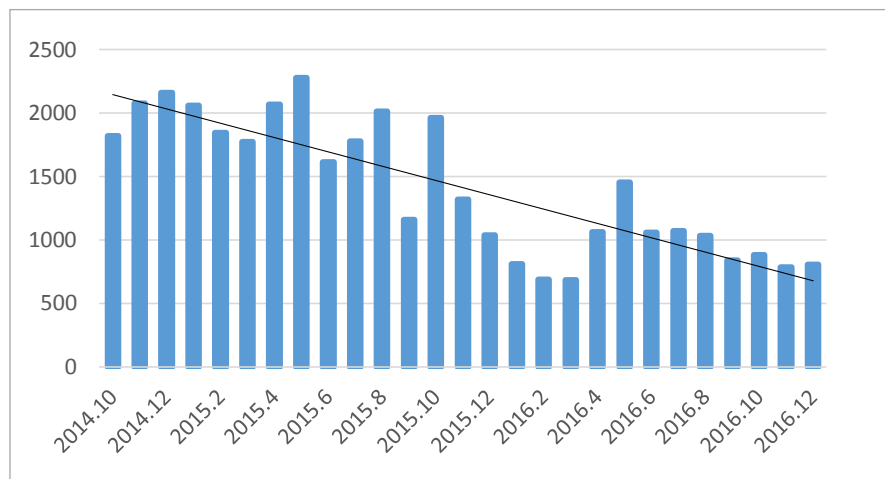
The exchange rate used in this report is USD1 = RMB6.89, as on 14 April 2017.

## RESULTS

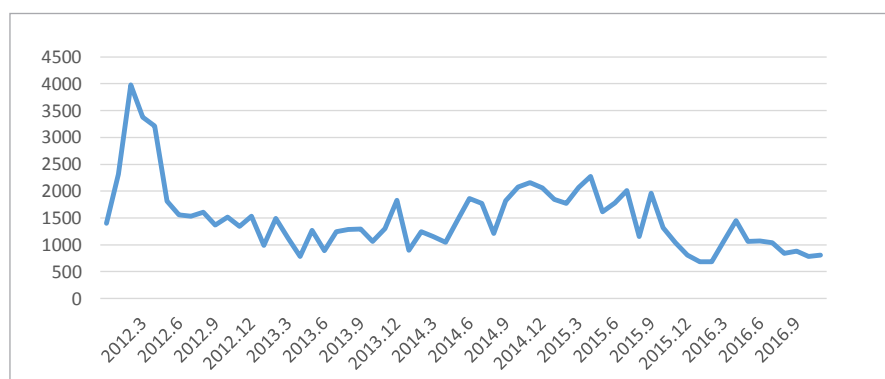
### E-commerce monitoring

The period from October 2014 to December 2016 saw an overall decrease in monthly advertisements. During the first 14 months, from October 2014 to November 2015, monthly advertisements were above 1500 per month, except in September 2015 and November 2015. From December 2015 to December 2016, advertisements were usually around 1000 per month, except for May 2016 when they rose to 1,454 advertisements.

Compared with findings in earlier research (Xiao and Wang, 2015), although there was a sustained period from June 2014 to September 2015 when the number of advertisements was above 1500 per month (Figure 3) (possibly this was because progressively more new websites were being monitored and more key terms were being used for searching), the average monthly advertisements in 2015 was over 1700, which was slightly more than in 2014 which averaged 1500 advertisements per month. The monthly average declined in 2016 to 1000, only 44.7% of 2012 levels (Figure 3).



**Figure 2. Number of monthly Advertisements (October 2014–December 2016)**



**Figure 3. Number of monthly Advertisements (2012–2016)**

TRAFFIC also calculated monthly numbers of advertisements for each major wildlife product since 2012. The statistics show that ivory products have the highest share of advertisements (63.2%), followed by rhino horn products (18.1%). These two wildlife products represent the most visible endangered species in website-based wildlife trade, accounting for over 80% of all monthly advertisements. The remaining 20% were split between Hawksbill Turtle shells (7.7%), hornbill casques (4.7%), Tiger bones (4.0%), Saiga horns (1.6%), pangolin scales, leopard bones and whale products (0.5%, 0.2% and 0.1% respectively).

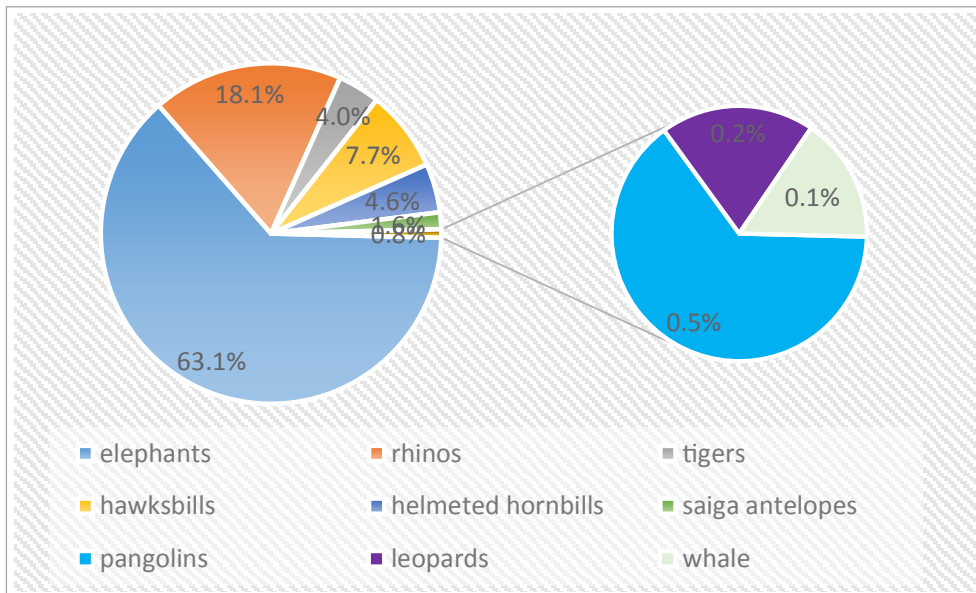


Figure 4. Monthly Advertisements by species (2012–2016)

For better understanding of the traits and features of website-based wildlife cybercrime, TRAFFIC did further analysis on advertisements concerning ivory and rhino horn products, given their significant trade volumes in the market.

**Ivory.** Ivory products sold through websites are mostly for the purpose of collection, and are usually presented as “antique ivory” or “old ivory”, for those items carved before The People’s Republic of China was founded in 1949, compared to “modern ivory” or “new ivory” if processing occurred after that date. The “old ivory” products were mostly pendants, pieces for functional household goods, purely decorative carvings and some jewellery products. The majority of “modern ivory” products were jewellery, with bracelets, bangles, necklaces and necklace beads being the most common items. There were few larger decorative carvings, and pieces for functional household goods were very rare. Prices<sup>1</sup> of ivory products vary hugely depending on the size and age—e.g. a 4x6x1 cm plate (Figure 5) of “modern ivory (left)” was priced at RMB570 (USD82.70), while one (right) of the same size but carved during the Qing Dynasty was priced eight times higher at RMB4900 (USD711.20).



Figure 5. New (left) and old (right) carved ivory products

<sup>1</sup> Only a few e-commerce platforms have made price information mandatory in product posting. However, many dealers put “price available upon request” or fake figures (999999 or 1) in lieu of the real price so it is difficult to analyse price data.

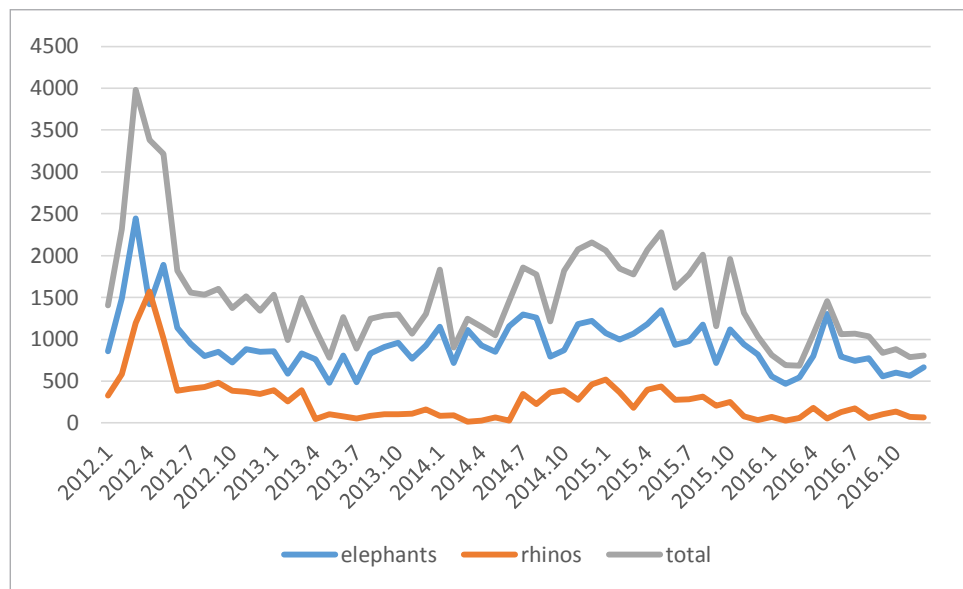
**Rhino horn.** Rhino horn products advertised through websites were also mainly for collection, except for rhino products sold on pharmaceutical websites as medicinal products, which were not surveyed for this report. The captured advertisements were largely for old rhino horn products (pre-1949, as per definition of “old” ivory) and only a small number of advertisements concerned new products. Although a large number of advertisements appeared on websites every month, most of them were found to be fake after examination of the photos in the advertisements.

Compared to ivory, it is more difficult for untrained customers to verify the authenticity of rhino horn from pictures online, and the huge price differences have made it even more challenging for ordinary consumers to identify whether a product is real or a fake. An old rhino horn product can range in price from a few thousand yuan to several million (USD600–600 000), while some dealers were charging RMB600 (USD87.10)/gram for new rhino horn products.



**Figure 6. New (left) and old (right) rhino horn products**

A similar pattern in the number of advertisements was evident between 2012 and 2016 for ivory, rhino horns, and all wildlife products surveyed for this report (Figure 7). There was a dramatic drop in monthly advertisements for ivory and rhino horn products from the first half of 2012, as a result of a concerted effort by enforcement agencies and website managers to stamp out illegal wildlife trade through websites. However, a resurgence in advertisements was evident from July 2014 through October 2015, representing a second peak since TRAFFIC’s monitoring began, although the level of trade was lower than 2012 averages. This second peak was particularly pronounced for both ivory and rhino horn products (possibly because more new websites were being monitored and more key terms were being used for searching).



**Figure 7. New advertisements for ivory, rhino horns and all wildlife products surveyed, 2012–2016**

From the latter half of 2012 onwards, monthly advertisements for ivory remained in the range of 400–1400. The lowest number recorded during this period was 469 in February 2016, while the highest number occurred in May 2015 with 1351 advertisements.

There were around 500 fewer advertisements for rhino horn compared to ivory each month; the highest number recorded was 522 in January 2015 and the number of advertisements for rhino horn only exceeded

those for ivory in April 2012. It is worth noting that the decrease over the five month period from October 2015 to March 2016 coincided with President Xi Jinping’s visit to the United States (US) and the subsequent agreement with President Barack Obama to commit to establishing ivory trade bans in their respective countries. The agreement between China and US was zealously reported by the Chinese media and placed the future of domestic ivory trade at stake. Even though the initiative was meant for legal ivory dealers, it nevertheless might have caused online dealers operating in the “grey area” to exercise caution when uploading ivory advertisements, while enforcement agencies continued to adopt stringent measures against online marketing, including the removal of related information. The number of advertisements increased again a few months later, perhaps related to the absence of any specific timetable from the government on shutting down the legal ivory market.

### Social media survey

During May to July 2016, five random surveys were conducted on the 58 social media accounts originally surveyed in TRAFFIC’s previous social media monitoring report, *Deadly messaging* (Guan and Xu, 2015), that were still actively advertising wildlife products. The results of the 2016 survey concerning illegal ivory trade on social media are presented in Table 1.

### Main websites

One antiques trading website registered in Shanghai caught the attention of TRAFFIC researchers as the most active online illegal wildlife trading platform, with monthly advertisements often accounting for more than half of those in all product categories. Statistics show that from 2012 to 2016, the website posted a total of 31 062 new illegal wildlife advertisements, or 34.5% of all new postings, ranking the top amongst all other online platforms in the survey. For this Shanghai-based website’s 2016 postings, ivory items were the most abundant (73.4%), followed by rhino horns (14.4%) and Hawksbill Turtle shells (5.0%). According to the product age information provided (from a sample size of 1199 advertisements), dealers claimed 90.2% of the items on offer were antiques (processed before 1949), versus only 9.8% who classified their products as modern.

Survey Results	Number of advertisements	Number of images & videos
1 <sup>st</sup> survey	146	856
2 <sup>nd</sup> survey	107	517
3 <sup>rd</sup> survey	133	647
4 <sup>th</sup> survey	102	487
5 <sup>th</sup> survey	185	1014
<b>Total</b>	<b>673</b>	<b>3521</b>
<b>2016 average</b>	<b>135</b>	<b>704</b>
<b>2015 average</b>	<b>227</b>	<b>1236</b>

**Table 1. Survey findings for ivory advertisements on social media, 2016**

The five random surveys in 2016 found 673 ivory advertisements and 3521 images or videos in total. There was an average of 135 advertisements per day during the 2016 surveys, representing a decrease by 40.6% compared to the 2015 average of 227 advertisements per day. Likewise, in 2016, images and videos averaged 704, which was a decrease of 43% compared to the previous year when an average of 1236 images and videos were observed. The current surveys re-examined social media accounts that were previously identified in the *Deadly Messaging* report (Guan and Xu, 2015), in particular the 27 (from the original 58 dealers identified in 2015) that had remained active in the trade—following the release of the 2015 report, enforcement action took place against 16 of

the dealers who were subsequently suspended from social media, while another 15 dealers have now quit the ivory business. The pattern of trade in 2015 and 2016 by these remaining 27 dealers is presented in Table 2.

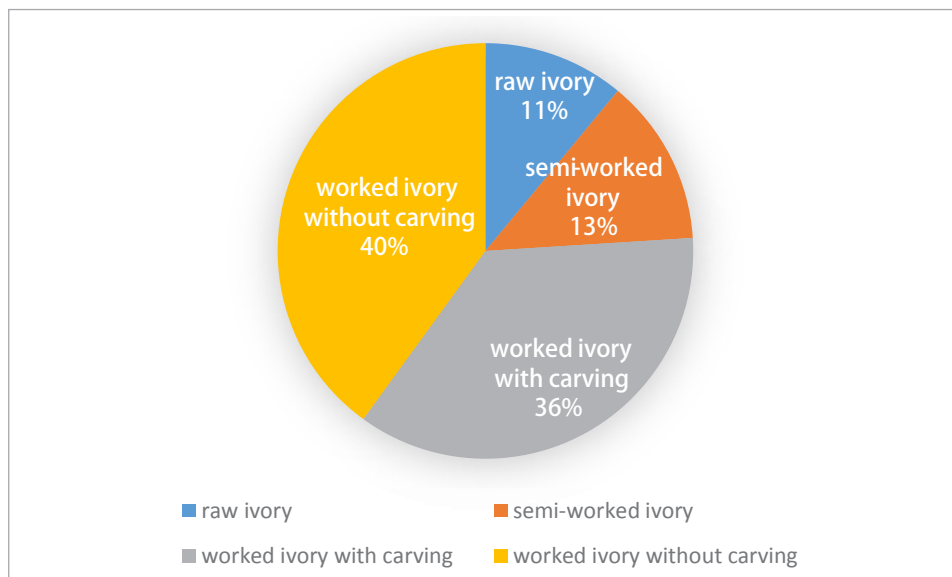
	2015	2016
Average number of advertisements per day	115	135
Average number of images and videos per day	596	704

**Table 2. Illegal ivory advertisements by 27 active dealers (2015–2016)**

Table 2 shows that these remaining 27 accounts were highly active in 2016, with an increase in the average number of advertisements and images uploaded from 2015 to 2016, by 17% and 18%, respectively, suggesting these 27 persistent dealers may have accumulated a wider customer network between 2015 and 2016.

Even though local police and social media operators took measures in 2016 to combat online crime, many dealers have continued to take advantage of the privacy of social media platforms to make illegal wildlife transactions.

The social media survey approximated the composition of the major types of ivory products sold (Figure 8). Of particular note is the frequency of advertisements for raw and half-finished products (e.g. tusks), which accounted for nearly a quarter of the total number of ivory items observed. Generic finished products (bangles, chopsticks, name seals, beads, etc.) without carving appear most frequently, followed closely by finished products with carving (Buddha statues, carved beads and bangles, carved chopsticks, etc.) as the next most frequent (Figure 8).



**Figure 8. Share of four major types of ivory products traded in social media**

## DISCUSSION

The website-based monitoring statistics collected over the past five years reveal significant online trade quantities of wildlife products, with over 10 000 new advertisements posted every year. Although this is 60% less than the 25 000 new advertisements found in 2012 surveys<sup>2</sup>, there was a resurgence in advertisements during 2015, when 20 905 new ones were posted, indicating an active online trade through websites in illegal wildlife. At the same time, the number of seizure cases identified by enforcement authorities was also considerable in 2015. Chinese police forces cracked down on several large illegal wildlife trade cases: Beijing Forest Police, for example, in terms of law enforcement efforts against both online and offline illegal trade in wildlife products,

<sup>2</sup> Internal and unpublished TRAFFIC data.

seized 804.4 kg of ivory, 35 bear paws, and Saiga horns, pangolin scales, Narwhal teeth and other products of protected wildlife on 21 May 2015<sup>3</sup>. In 2016, the total number of advertisements was significantly less than in 2015 (a decrease of 46.5%). However, more than 10 000 advertisements were still recorded during 2016. It is recognized that these monitoring statistics are based on TRAFFIC's own small sample size and represent only a fraction of the total scale of wildlife cybercrime in China. Thus, patterns in the TRAFFIC data should be regarded as relative indicative measures of the trade over this period, not absolute values in their own right.

TRAFFIC shares its monthly survey results with website operators on a timely basis, and provides technical and informational support where necessary. Most of the service providers are taking active measures to deal with any information provided on illegal trading activities, ranging from removing advertisements, to prohibiting users to re-post the information, and even closing the user's account altogether. For example, at the beginning of 2017, TRAFFIC surveyed the largest online searching platform in China and shared the results with the website operators. By the end of March, a total of 20 forums on that platform were closed, while one became read-only and four were emptied, and about 70 000 pieces of information that violated the website's rules or laws were cleared. Twenty users were charged with serious misconduct and were permanently banned by the service provider. These measures are very commendable actions and show the proactive stance of China's service providers in addressing wildlife crime through the internet within their limited sphere of law enforcement capabilities. At the same time, it should be acknowledged that these actions fall short of punitive actions such as arrests and fines or jail for violation of China's wildlife trade law and ways to ratchet up penalties for illegal wildlife trading through the internet need to be considered.

Dealers, who are likely to be fully aware of the illegal nature of their online sales or at least violations against website regulations, tend to respond by merely changing the keywords used in new advertisements to avoid detection. Some keywords used (such as "jelly" or "bagels") cannot be filtered because of their common use for other legal products. Some dealers publish only product images, without any descriptions. Webmasters often find it difficult to deal with illegal wildlife trade information quickly due to a lack of ability to identify products by images, and the high cost of doing so in terms of labour and time. These obstacles partially explain why there are still numerous new postings of illegal wildlife products on websites every month.

In addition to ivory and rhino horns, the illegal trade of other types of wildlife cannot be ignored. Information for Hawksbill shell products, for instance, can be found on many websites and in several varieties. The situation of the Helmeted Hornbill, which is indigenous to Southeast Asian countries, is unique. The Chinese name for Helmeted Hornbill is *Hedinghong*. However, illegal trade of *Hedinghong* in China has not received adequate attention from the government and law enforcement agencies, while the public is at present unaware of the threat to this species, nor its legal status and current predicament. In 2017, TRAFFIC plans to strengthen the monitoring of the trade in *Hedinghong* and related products.

This survey has also highlighted one Shanghai-based antiques trading website that consistently fails to regulate site users from posting illegal wildlife products. According to the *Wild Animal Protection Law*, which came into effect on 1 January 2017, this website's management is now in violation of Articles 31 and 32 of this legislation.

There is also a tendency to advertise certain wildlife products as "old" pieces, produced before 1949, giving the impression that the dealers are complying with the law. However, the number of such claims may suggest that there is a misunderstanding about the need to substantiate such claims concerning antiquity. In fact, antique wildlife products from legitimate sources can be traded only after the products' age has been verified by relevant government authorities, otherwise their sale is illegal. Website operators need to enhance their awareness of relevant legislation and address the posting of unverified wildlife products for sale appropriately and in a timely manner.

Results of the 2015 TRAFFIC social media survey and the 2016 survey for this briefing show a common finding in that the number of illegal ivory products posted on social media platforms is relatively large, and transaction quantities are therefore thought also to be high. Following actions taken by social media operators, forest police

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<sup>3</sup> Forestry police significantly cracked down forest crimes  
[http://news.xinhuanet.com/politics/2016-02/17/c\\_128726660.htm](http://news.xinhuanet.com/politics/2016-02/17/c_128726660.htm)



and other law enforcement agencies against illegal wildlife traders, 31 of 58 accounts monitored by TRAFFIC in 2015 had been removed or prevented from selling illegal wildlife products by the time of the 2016 survey. In July 2016, social media operators declared that they had shut down over 700 accounts, involving more than 300 000 illegal postings, and filed 65 large account cases with the National Forest Police (Tencent, 2016). These actions have driven some active dealers to create “backup accounts,” and they have encouraged customers to join them there in case their main accounts are shut down by the authorities and their customer details lost.

Despite social media becoming a major channel for illegal wildlife trade, its private and instant messaging nature has at the same time limited the audience receiving illegal wildlife information and transactions to people who have become “friends,” and is therefore not conducive to widespread dissemination of information. The expectation is that dealers will continue to publish illegal wildlife product advertisements from their own accounts on public websites, to draw a larger audience, before closing the deal once potential buyers have become “friends” on social media. To prevent this, website operators are encouraged to remove such postings promptly to avoid becoming springboards for illegal wildlife trade.

Nearly a quarter of ivory advertisements found on social media concerned raw materials or half-finished products, which suggests that dealers earlier in the trade chain (smugglers, wholesalers and manufacturers) can reach end consumers via social media. The likelihood is this will benefit dealers earlier in the trade chain as higher profits can be yielded with fewer intermediaries, and possibly lowers prices for end consumers (Figure 9). The ease of reaching a large audience online and sourcing products from producers seem to have stimulated both supply and demand, respectively. The convenience of supply channels, low costs and lucrative profits have attracted many users to become “agents” for illegal wildlife products, forwarding product information to their own circles of “friends” to attract potential consumers, which further stimulates consumption.



Figure 9. The pattern of illegal ivory trade through social media

Any single transaction depends upon a network of delivery, logistics and courier service providers, which play an important role linking sellers with buyers. Although the Government of China has already issued the *Regulations on Examination of Mails upon Acceptance*, requiring transport service providers to check all goods adequately before accepting them for transport, and refusing to transport any products that are classified as prohibited goods, some companies have still to implement this regulation effectively. Many couriers and transport companies do not have the knowledge to identify and refuse illegal wildlife products for transport. Given the majority of advertisements are for handicrafts of less than 12 cm in length, and many are smaller than 3 cm, it is very easy for sellers to hide illegal wildlife products, even if the boxes are checked by couriers who have the required knowledge to identify such items. How to close the illegal wildlife trade chain effectively at the delivery stage is a pivotal next-step for TRAFFIC’s work to combat wildlife cybercrime.

# RECOMMENDATIONS

TRAFFIC is committed to monitoring the illegal wildlife trade through e-commerce and social media, and work closely with social media operators and law enforcement agencies to combat wildlife cybercrime.

1. Wildlife administrations in China need to strengthen legislation and formulate at the earliest opportunity enforcement guidelines for the new *Wild Animal Protection Law*, as well as other laws and regulations, clarifying the responsibilities of websites, social media and transportation enterprises in wildlife protection and combating illicit wildlife trade.
2. Internet administrators need to strengthen supervision of websites and e-commerce platforms, to ensure that they take effective compliance measures and fulfill their legal obligations by timely removal of illegal wildlife sale information online, while actively co-operating with the police in the investigation and collection of evidence.
3. China's central government needs to empower a joint inter-ministerial meeting to combat wildlife cybercrime. Related government bodies, especially those overseeing internet and management entities, should be incentivised to crackdown on wildlife cybercrime.
4. Given the global reach of the internet, industry-wide exchanges and a policy framework on wildlife cybercrime should be built by the main internet companies to address the issue comprehensively and effectively. Wildlife cybercrime reaches across borders, so co-ordinated efforts are needed to simplify and standardise efforts to monitor the internet.
5. The internet industry needs to develop and share an implementation-focused guide on controlling and combating wildlife cybercrime; research measures and techniques to detect, control and combat illegal wildlife trade; build awareness and capacity of website and social media operators to uncover, control and combat illegal wildlife trade; and strengthen the collaboration between websites and social media operators and enforcement agencies.
6. The internet industry needs to establish an alliance amongst the various e-commerce and social media companies in China to work against illegal online trade of endangered species. In response to the *Advocacy on Combating against Illegal Wildlife Trade* (Forest Police, 2017), jointly issued by Tencent, Baidu and Alibaba, government agencies, internet/social media operators and non-governmental organizations around the world should aim to nurture a cyber environment to combat wildlife crimes and interdict illegal trade.
7. Logistics and courier companies need to improve their inspection and monitoring measures; provide training to couriers; develop and apply guidelines for the logistics and transportation industry on controlling and combating illegal wildlife trade and transportation; improve awareness of laws and regulations; and build capacity for the identification of endangered species and prevent the transport of illegal wildlife products.
8. Non-governmental organizations (NGOs) need to establish a long-term online wildlife trade monitoring system, with the scope of monitoring being greatly expanded. Current monitoring is focused only on high-risk websites and on flagship species. This needs to be amplified to capture the broader scope of cyberspace. To be effective at combating wildlife cybercrime in the long run, more advanced internet monitoring tools need to be adopted, with methods of monitoring modified to meet the changing trends and characteristics of illegal trade.
9. Government agencies, NGOs, the private sector, internet providers, e-commerce and social media businesses need to increase the awareness of online users about the need for wildlife protection, that purchasing illegal wildlife products over the internet is breaking the law, and about their individual obligations to counteract

illegal wildlife trade. On- and off-line publicity activities would help users to understand better the causal relationship between such crimes and the threats they pose to the survival of wild species. The aim should be to influence people to resist the illegal trade of endangered species consciously, change individual behaviour and sway others in making ethical consumption choices.

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TRAFFIC, the wildlife trade monitoring network, is the leading non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

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