



IFAW

International Fund for Animal Welfare

OUT OF AFRICA: Byting Down on Wildlife Cybercrime



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1 | EXECUTIVE SUMMARY

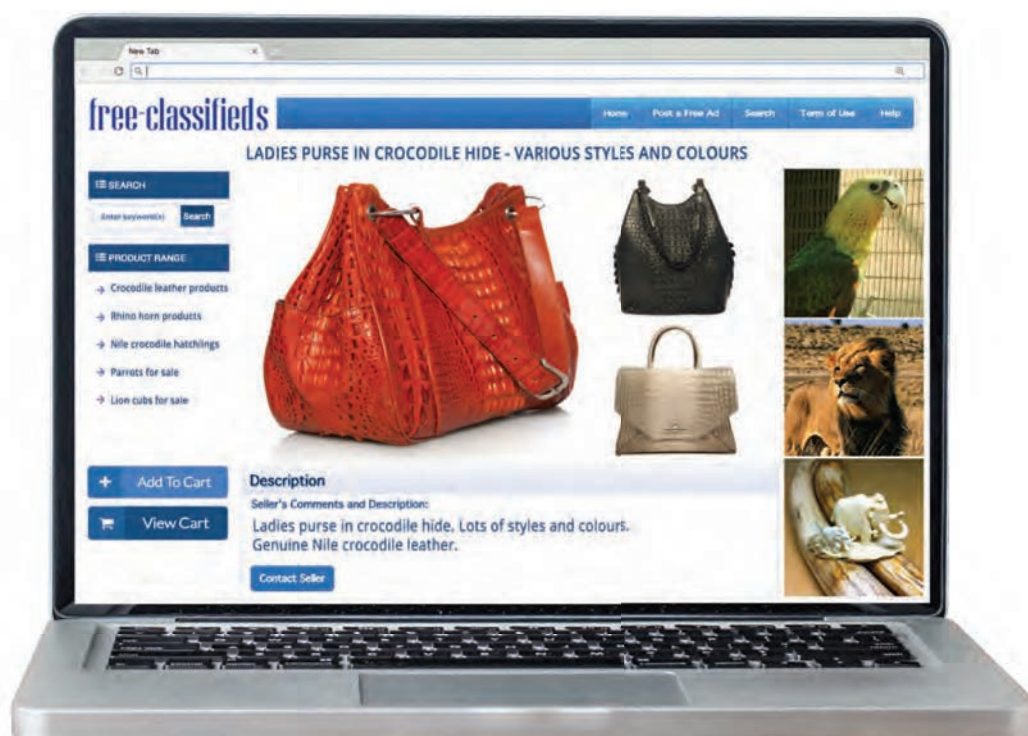
The International Fund for Animal Welfare (IFAW) has been researching the threat that online wildlife trade poses to endangered species since 2004. During that time, our research in over 25 countries around the globe has revealed the vast scale of trade in wildlife and their parts and products on the world's largest marketplace, the Internet - a market that is open for business 24 hours a day, 365 days a year.

Whilst legal trade exists in respect of many species of wildlife, online platforms can provide easy opportunities for criminal activities. Trade over the Internet is often largely unregulated and anonymous, often with little to no monitoring or enforcement action being taken against wildlife cybercriminals. In addition, cyber-related criminal investigations are complicated by jurisdictional issues, with perpetrators in different geographical locations and laws differing from country to country. This poses a serious threat to the survival of some of the world's most iconic species and the welfare of individual animals.

This report outlines the results of new IFAW research in seven different countries in Africa, exploring the availability of wild animals and their products in an area of the world with a rapid growth in access to the Internet.

This research is part of a broader project to address wildlife cybercrime in Africa, funded by the US government's Department of State's Bureau of International Narcotics and Law Enforcement Affairs (INL). The wider project included researching trade in elephant, rhino and tiger products over the 'Darknet'; providing training on investigating wildlife cybercrime to enforcers in South Africa and Kenya; ensuring policy makers addressed the threat of wildlife cybercrime through adopting Decision 17.92 entitled Combatting Wildlife Cybercrime at the CoP17 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in Johannesburg 2016; carrying out a review of legislation as it pertains to wildlife cybercrime; and providing training to online technology companies to assist with the effective implementation of their policies.

Research focused on online marketplaces and social media platforms utilised by traders stating they were based in Ethiopia, Ivory Coast, Kenya, Nigeria, South Africa, Tanzania and Uganda. In most cases, this meant focusing on trading platforms based in those specific countries, but researchers also identified traders stating they were based in South Africa using international Alibaba and eBay sites.



Fabricated website for the purposes of this report.



An African lion cub, Serengeti National Park, Tanzania, East Africa.

In total, IFAW researchers identified 990 endangered and threatened wildlife advertisements across 33 online marketplaces and three social media platforms during a six-week period across seven African countries. Sellers offered for sale a total of 9,481 specimens of animals which are listed on Appendix I and II of CITES or that are protected by national or provincial laws in the relevant country/jurisdiction. The total value of all such goods for sale was approximately US \$5,828,608.

Although crocodiles and alligators (a species not endemic to Africa) make up over two thirds of specimens for sale, elephant, snake and parrot specimens were also offered for sale in significant numbers - with elephant hair items, rather than ivory, making up the bulk of elephant product advertisements. A total of 123 cat specimens - including products and live animals - were also identified, as well as 27 rhino specimens including live white rhinos and black and white rhino horn for sale.

Our research reveals that South Africa and Nigeria have significant levels of trade in these protected species, with 718 and 219 advertisements respectively totalling 9,357 wildlife specimens for sale, with a corresponding higher risk of facilitating illegal wildlife trade. In contrast, the Ivory Coast, Tanzania, Uganda and Ethiopia had very little wildlife for sale.

Online marketplaces make up the majority of trade identified in this research, hosting 887 advertisements (90 per cent). Whilst representing a much smaller amount of trade than traditional online marketplaces,

social media platforms are also being used to host wildlife trade in South Africa, Nigeria and the Ivory Coast. The scale may be higher than this report indicates, as trade on these platforms is particularly hard to identify and quantify.

Although it is not possible to tell how many of the total specimens recorded were being traded legally or illegally, 33 information logs representing 392 advertisements in total from this research were handed over to national enforcers for further investigation, identifying traders stating they were based in South Africa, Nigeria and the Ivory Coast. Researchers used a number of indicators to identify *potential* breaches of legislation, for example instances of CITES Appendix II listed species being offered for sale internationally without any reference to CITES permits. Whilst this in itself is not against the law as there is no legal requirement to reference permitting online, this may provide a reason to research a particular advertisement further.

Whilst wildlife trade continues to threaten the future of many of the world's most endangered species and African consumers gain growing access to the Internet and social media, it is essential that online platforms and governments take action to raise consumer awareness and tackle the challenges of online wildlife trade. This includes supporting improved enforcement efforts, engaging with online technology companies and strengthening national legislation to help combat wildlife cybercrime.

2 | BACKGROUND

Since the development of the Internet and its transformation of our ways of communicating and carrying out business, the situation facing the world's wildlife has deteriorated significantly. Alongside pressures from habitat destruction, human/wildlife conflict, climate change and wildlife trade, the Internet poses an additional challenge to the future of endangered species.

Whilst legal trade exists in respect of many species of wildlife, online platforms provide easy opportunities for criminals to advertise their illegal products. Trade over the Internet is often largely unregulated and anonymous, often with little to no monitoring or enforcement action being taken against wildlife cybercriminals. In addition, cyber-related criminal investigations are complicated by jurisdictional issues, with perpetrators in different geographical locations and laws differing from country to country. Online trade inevitably becomes offline trade when the product is shipped from the trader to the buyer, at which point it becomes subject to traditional enforcement methods used to detect and monitor crime. Whilst some enforcement agencies are yet to develop strategies to address wildlife cybercrime they may be focusing on disrupting the supply chain through seizures at ports of entry and exist.



Pangolin

In order to understand the nature of the threat posed by online wildlife trade IFAW has been carrying out research on this issue since 2004. Over that time, our research of over 25 countries around the globe has revealed the vast scale of trade in wildlife and their parts and products on the world's largest marketplace, the Internet - a market that is open for business 24 hours a day, 365 days a year. IFAW's 2008 report *Killing with Keystrokes* identified 7,122 advertisements offering trade in endangered wildlife over a six-week period across eight countries. A follow up report *Wanted - Dead or Alive: Exposing Online Wildlife Trade* in 2014 found 9,482 similar advisements offering a total of 33,006 endangered wildlife specimens for sale in 16 different countries, worth nearly US \$11 million. As a result of that survey, 1,192 intelligence files - almost 13 per cent of advertisements - were submitted to law enforcers for further investigation into potential criminal activity. Both reports found significant numbers of elephant products and exotic birds as the specimens most widely offered for sale over the Internet, with the latter report also finding reptiles and their products in a quarter of all advertisements.

A growing number of online platforms are adopting policies specifically targeting wildlife cybercrime, but there are still many companies not meeting this basic standard. This poses a serious threat to the survival of some of the world's most iconic species and the welfare of individual animals. As more parts of the world gain access to technology and connectivity along supply chain routes, the Internet offers a thriving platform for buyers and sellers to trade illegal wildlife specimens. IFAW reports on this trade have led to an acknowledgement by many governments, enforcement agencies and online technology companies that online wildlife crime is a significant problem.



African elephant

3 | RESEARCHING ONLINE WILDLIFE TRADE IN AFRICA

This report outlines the results of IFAW's research into online wildlife trade over online marketplaces and social media platforms across seven African countries¹. The purpose of IFAW's research in Africa was to:

- Measure the scale and nature of the trade across both online marketplaces and social media platforms utilised by traders in Ethiopia, Ivory Coast, Kenya, Nigeria, South Africa, Tanzania and Uganda. This included sites hosted in those countries as well as international sites utilised by traders stating that they were based in those countries. Researchers classed traders as operating in a particular country based on the seller location details provided in each advertisement.
- Assess whether the growth in Internet access across the continent¹ has corresponded with wildlife criminals using the internet to facilitate their illegal trade.
- Identify advertisements and posts, and thereby traders, who could potentially be in breach of national and/or international conventions and therefore worthy of further investigation by national enforcers.
- Identify countries where wildlife cybercrime could be a potential risk for endangered wildlife and therefore where there is the greatest need for enforcement capacity and knowledge as well as the need for clear, robust legislation addressing online wildlife crime and the increased engagement of the online companies themselves.



A pile of ivory tusks

1. 'Internet development and Internet governance in Africa' by Towela Nyirenda-Jere and Tesfaye Biru (May 2015). <https://www.Internetsociety.org/doc/Internet-development-and-Internet-governance-africa>



African elephant herd

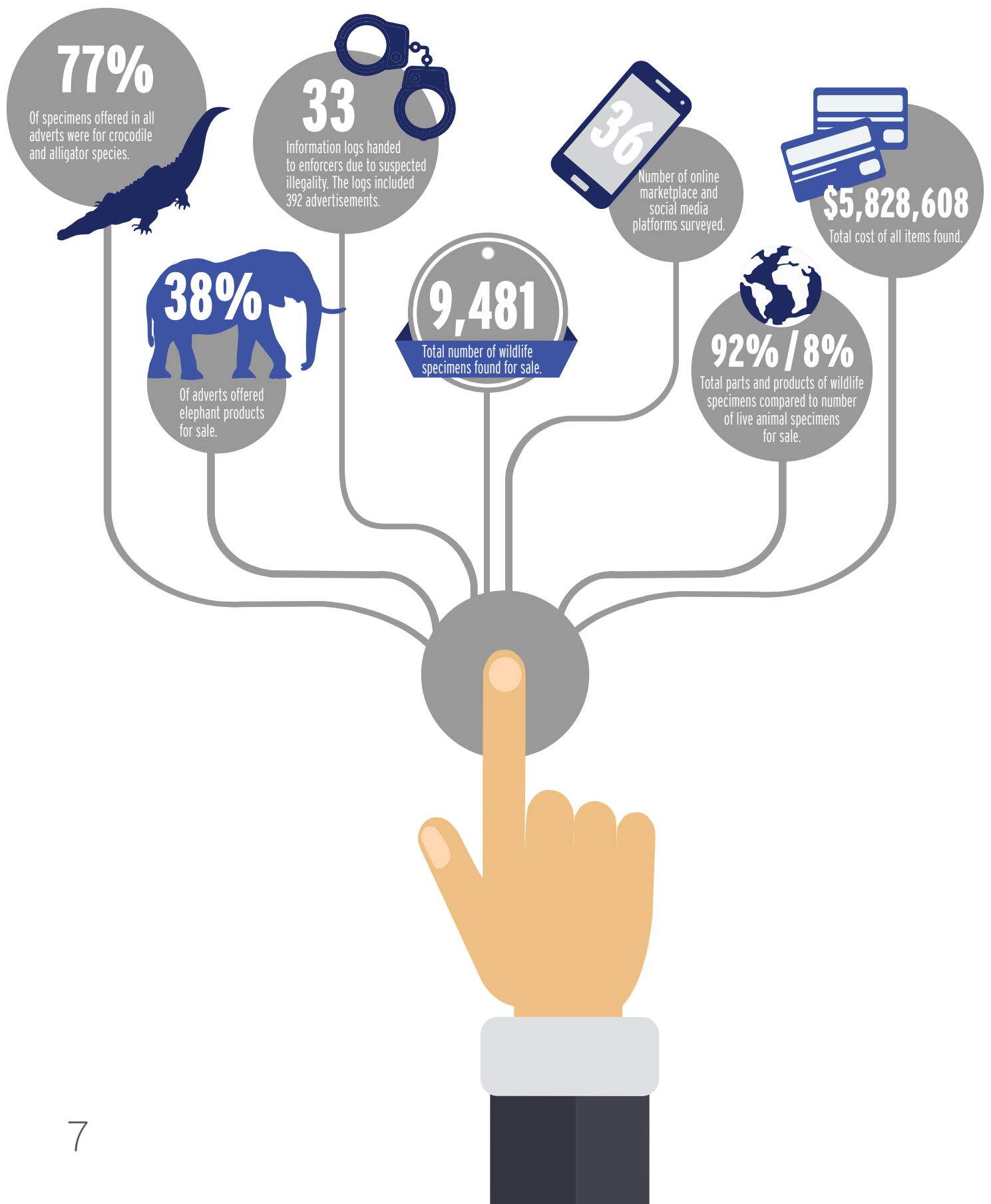
Social media platforms Facebook, Twitter and Instagram were included in this research after our review of the online wildlife trade in China as presented in IFAW's report *Wanted - Dead or Alive* revealed a shift away from selling wildlife products via online marketplaces to more private online forums and social media platforms. Baidu Tieba (Bar), an online public forum, for example, was responsible for 55 per cent of trade in China in that survey, hosting 1,154 advertisements. That investigation also showed that a good proportion of sellers used social media as the main method of contact between sellers and buyers.

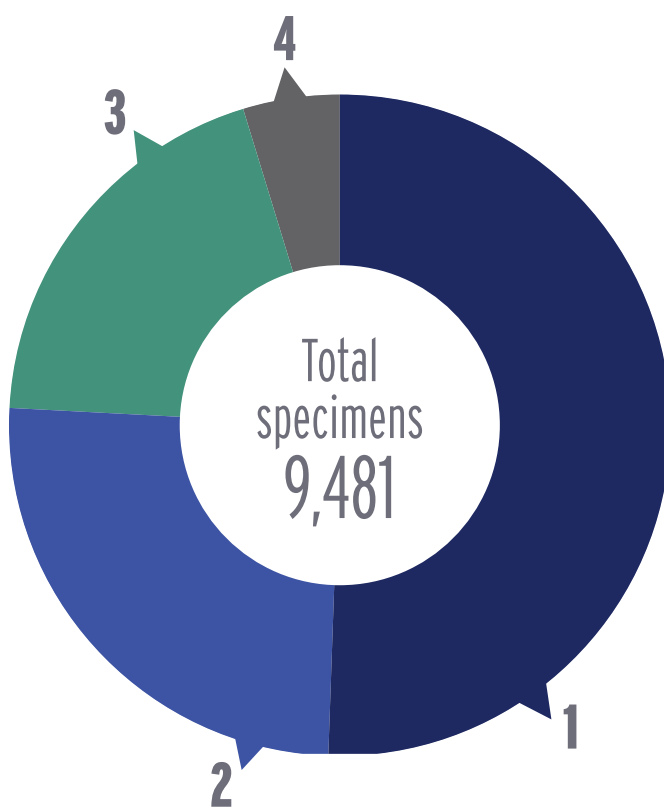
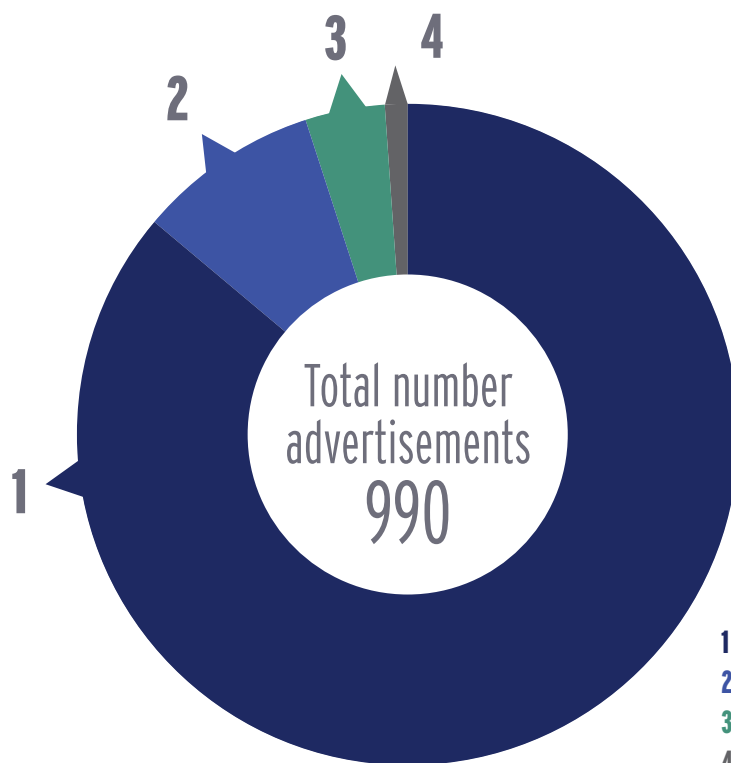
As in previous surveys, IFAW researchers focused on online marketplaces and forums on the 'Surface Web' where sites are freely available to the public. Outside of the scope of this research is the threat posed to wildlife by the 'Darknet', a part of the Internet which is hidden and anonymous, and which disguises the identity and location of users. Many illegal activities, such as trade in drugs, weapons and child pornography have moved

onto the Darknet where perpetrators have a greater level of anonymity than over the surface web. Research into any illegal wildlife trade on the Darknet will be addressed in a separate project led by INTERPOL.

In total, IFAW researchers identified 990 advertisements in seven different African countries across 33 online marketplaces and three social media platforms over a six-week period. Sellers offered 9,481 specimens of live animals and parts and products, with crocodiles and alligators making up over 76 per cent of posts. Elephant parts and products were the second most common specimens for sale, including 765 elephant hair bracelets and a number of ivory items. One hundred and twenty-three cat specimens, including products and live animals, were offered for sale. Researchers also identified 27 rhino specimens offered for sale, including live white rhinos and black and white rhino horn. The total value of all goods for sale was approximately US \$5,828,608.

4 | KEY RESULTS AT A GLANCE





5 | METHODOLOGY

FWF's research in Africa took place during the middle of 2015 and in 2016 across seven countries, looking at both live wild animals and their derivative parts and products of species listed on the Convention on International Trade in Endangered Species (CITES) Appendix I and II. The research also included several other species of national concern which are protected by CITES Appendix II or national or provincial laws, as identified by local wildlife conservation experts. The research was carried out in four phases:

- **Phase one - preparation**
Identifying the target online marketplaces, social media platforms, species and associated parts/products, as well as languages that would be included in the search criteria
- **Phase two - testing and finalisation**
Testing the items identified in phase one through applying them in a pilot study and refining the criteria as required. This also provided an opportunity to disseminate research in countries where the scale of the trade was negligible.
- **Phase three - research**
Systematically researching the targets for a period of six weeks, ensuring all data was recorded in a standardised format
- **Phase four - analysis and reporting**
Analysing the research results to identify trends and traders who may require further investigation by enforcement authorities. Where researchers identified that a trader could be in breach of applicable laws, an enforcement log was created and submitted to a Single Point of Contact (SPoC) at a national enforcement agency.

Researchers aimed to only record advertisements that were posted in the last months prior to the date of each survey, although with some exceptions this was more difficult when no date was provided for when advertisements were first posted.

In order to gather as complete a picture of trade as possible, FWF researchers recorded both the number of advertisements posted on relevant sites across the survey period, as well as the number of species and specimens offered for sale in those

advertisements. One single advertisement may offer multiple and different kinds of animals for sale, which posed a challenge when representing data in the summary tables in this report. Multiple species offered in one advertisement are clearly represented in the 'Total specimens' data column in the summary tables, but may be under-represented in the 'Total advertisements' column, as we took care to select just one species to represent each advertisement.

As is provided further by FWF researchers, identified a number of 'scams' that were not included in the survey results. These are false advertisements that most commonly offer live birds, primates and cats for sale, aiming to attract funds from an unsuspecting buyer for something that doesn't exist. This was particularly an issue for researchers in Nigerian websites. Scam advertisements are often identified through the use of poor language or repeated phrasing, the offering of many different species of animals and eggs for sale or offering specimens that are considerably under-valued, as well as the use of stock photos. We attempted to remove these to identify possible scam traders and therefore exclude their advertisements from the research.



Image: iStockphoto

6 | CITES & WILDLIFE CYBERCRIME

The CITES Appendices

This research focused mainly on endangered wildlife afforded a high level of protection by the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES). CITES governs commercial trade in endangered and threatened wildlife, with 183 member states responsible for transposing the Convention into national legislation to protect wild animals and plants.

CITES Appendix I

Species that are threatened with extinction which are affected by international trade are placed on Appendix I of the Convention offering the highest level of protection. With a few exceptions, international commercial trade in these species is prohibited. This includes highly vulnerable species such as some elephant and rhino populations, pangolins, tigers and other big cats, marine turtles and a number of exotic birds.

CITES Appendix II

Species that are not immediately threatened with extinction but may become so, unless their trade is subject to strict regulation, are placed on Appendix II of the Convention. International trade in these species requires an export, and often import, permit for trade to go ahead between countries.

CITES Appendix III and domestic legislation. Appendix III is a list of species included at the request of a Party that already regulates trade in the species and that needs the cooperation of other countries to prevent unsustainable or illegal exploitation. A few species were counted in this research that are on Appendix III of CITES or are not CITES-listed, but which are offered additional domestic protection under national or provincial legislation (for example the brown hyena is listed as a protected species in South Africa in the Lists of Critically Endangered, Endangered, Vulnerable and Protected Species published in Government Notice R151 in Government Gazette 29657, on 23 February 2007 (the TOPS List)).

CITES controls international trade in wildlife - or their parts and products - through a system of permits or certificates for species listed on the Convention's appendices, to ensure that trade does not threaten the survival of the species in the wild. Trade that takes place without the required certificate or permit is illegal.

CITES is not self-executing, therefore member states must ratify the convention and transpose the convention into national legislation for it to be implemented by enforcers at the national level. Some countries go over and above the requirements of the CITES convention when they create their national legislation. CITES does not govern domestic trade in endangered species; however, countries can place restrictions on their domestic trade by creating national legislation designed for this purpose.

However, compared to conventional marketplaces, distinguishing legal trade from illegal trade is particularly challenging over the Internet, especially given the vast amount of electronic traffic. Items cannot be examined in person and there is usually little, if any, supporting documentation such as CITES or other national or provincial permits or certificate numbers provided to indicate that the trade is legitimate. Sellers are also not required by law to

state in an advertisement that such documentation may be required at the point of sale. Sometimes the item may be disguised as another product, such as ivory being described as 'ox bone', while the traders' identity may not be immediately obvious. Items offered on the Internet can be purchased by either local or international traders and therefore it can be challenging to identify whether CITES or other domestic legislation governs the sale.

IFAW has been championing the issue of wildlife cybercrime on the global stage at meetings of the Conference of the Parties (CoP) to CITES since 2007. At CITES CoP17 hosted in Johannesburg in 2016, the Parties adopted Decision 17.92, tabled by Kenya, on Combatting Wildlife Cybercrime. This aims to bring together governments, enforcers and online technology companies in a common mission to save wildlife.

The Decision encourages Parties to establish best-practice on any enforcement taken to address illegal online wildlife trade, including working with INTERPOL to establish guidelines for investigations. It also encourages members to ensure they have relevant legislation in place to address this issue and to increase their engagement with online marketplaces and social media platforms.

7 | OUR PARTNERS

In addition to bringing this issue to the attention of policymakers through CITES, FWW also works in four key areas to help prevent illegal online wildlife trade:

1. Supporting enforcement by building their knowledge and expertise

This has included working with NGOs partners to provide training to enforcers including police, specialist wildlife units, customs and prosecutors from six different African countries including Kenya, Uganda, Tanzania, Congo-Brazzaville, Eritrea and South Africa. Results of pre- and post-assessments of individuals who have undergone the training show an increase in average total scores of research techniques rising from around 50-60 per cent to 80-90 per cent.

2. Providing information to online technology companies that is informs the development of strong policies and (i) works with their successful implementation. Results from previous FWW research have led to many online marketplaces introducing new and strengthened policies to make their customers more aware of the laws protecting endangered wildlife. This includes:

- In 2008 Alibaba, the world's largest business-to-business site for traders, agreed to ban all online postings of elephant ivory, rhino horns, shark fins and other prohibited wild animal and plant species.
- In May 2012, based on information provided by FWW, Baidu – the world's largest Chinese language search engine – shut down 15 specific wildlife trading targets called 'bait' on ivory, bat, tiger bone, bee, rhino horn, fur, etc. Baidu and removed over 38,000 listings of endangered species in illegal trade.
- In 2009, eBay banned the sale of all ivory items on its platform.
- In 2010, eBay banned the sale of ivory and all other products made from endangered species from its online marketplace.
- In 2010, the Chinese company Tencent – one of the largest internet companies in the world and owner of WeChat and QQ – banned Tencent

for the Planet, say this is Wildlife Trade, which includes a commitment to educate users on all of its marketing platforms about species conservation and eliminate wildlife trade. Build monitoring capacity of staff with wildlife conservation and species identification knowledge and remove infringing listings on WeChat.

- In 2016, seven companies namely eBay, Etsy, Lyst.com, Microsoft, Pinterest, Screenshot and Yahoo! adopted a global, standardised wildlife policy framework in collaboration with NGOs including FWW to identify shopping guidelines for consumers, identify prohibited products and eliminate the loopholes that make it easy for criminals to traffic wildlife online.

3. Identifying and supporting governments to strengthening legislation. The CITES Results has led the policy teams to creating specific legislation targeting online wildlife trade. Our work identifying the threat of online illegal wildlife trade has led to strengthened legislation in China and France. The law in the United Kingdom is also currently being amended to address the risk posed by wildlife criminals.

4. Working with computer experts to develop technical solutions. FWW has shared our knowledge and expertise with academics in order to support the development of data mining tools. New York University is in the process of developing their 'Enhanced Easy Interface (E2I)', a cutting-edge tool that uses a computer based algorithm to mine hundreds of internet sites for advertisements potentially containing illegal wildlife and wildlife products. The Cornell Institute of Conservation and Ecology (CICE) and the University of Kent created a tool that automates the search for potentially illegal ivory sales online. These data-mining tools are highly innovative and more work will need to be carried out to clarify if and how these tools can be used in practice by enforcers, academics, NGOs and online technology companies.

WWF's research into wildlife trade has contributed to multiple arrests and seizures by enforcement agencies. These include:

- The U.S. Fish and Wildlife Service (USFWS), with support from research provided by WWF and other NGOs, documented the black online wildlife transactions during the course of Operation Wet Web. As a result of the World-wide investigations, state and federal prosecutors ultimately filed over 400 charges. Officers seized the profits of endangered big cats such as Sumatran tigers, leopards and jaguars, five migratory birds and migratory bird nests, sea turtle shells and sea turtle skin foods, whale teeth, and elephant and walrus ivory.
- Law enforcement officers from the Australian Department of Environment seized illegal ivory products with an estimated value of up to AUD \$40,000 (US \$26,000) based on intelligence provided by WWF.
- Russian enforcement authorities carried out three controlled buys of a leopard, a polar bear and a tiger skin leading to the seizure of one of a leopard, and
- French customs officials, following initial information from WWF on leopard products being offered for sale online by a wildlife trader, went on to seize four elephant tusks from the same trader.



African grey parrot



African white rhino



African elephant herd

8 | INTERNET USE IN AFRICA



© IFAW / D. Willets

Giraffe

Across Africa, challenges with access to the Internet, its affordability and the quality of service means that whilst the continent's proportion of the global population is 15 per cent, its percentage of global Internet users is only six per cent. But access in certain regions is growing fast: continent-wide, Internet penetration levels are around 20 per cent and rising, although rates differ hugely from country to country. Mobile subscriptions are just under 70 per cent and mobile broadband access accounts for more than 90 per cent of Internet subscriptions. Work is now taking place to improve the current conditions in which Internet subscribers in Africa can pay up to 30 or 40 times more for Internet access than users in developed countries².

South Africa, Nigeria and Kenya have comparatively high Internet access rates, which may in part explain why these countries were identified as the top three for online wildlife trade of the countries surveyed. Given the significant growth in mobile communications and Internet penetration across the continent, trade in wildlife may be brought to a much larger market in the not distant future.

2. All facts in this section from 'Internet development and Internet governance in Africa' report by Towela Nyirenda-Jere and Tesfaye Biru (May 2015). <https://www.Internetsociety.org/doc/Internet-development-and-Internet-governance-africa>

9 | SUMMARY RESULTS

Reptiles

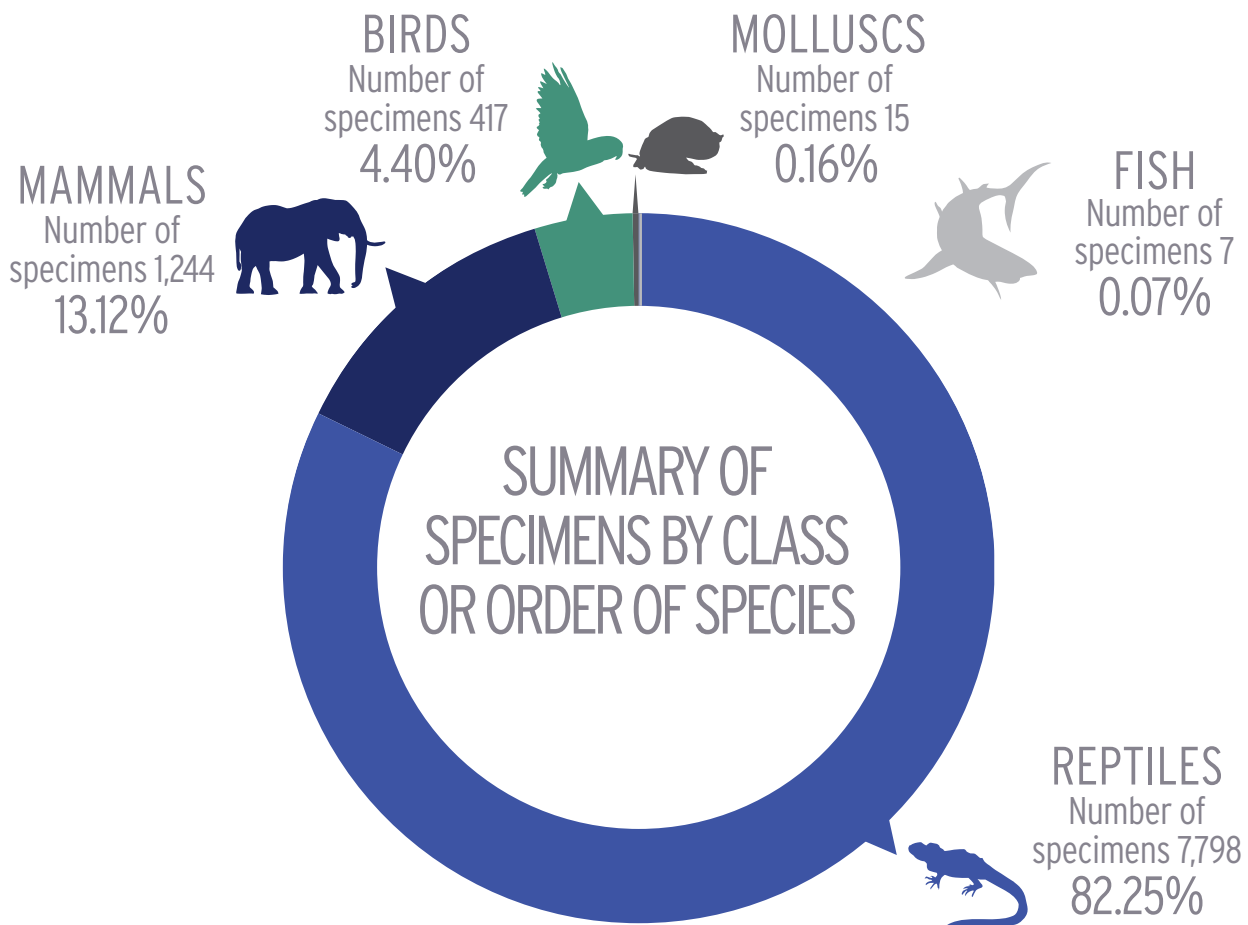
Looking at the total number of specimens offered for sale across all 990 adverts identified by researchers, reptiles were by far the most common species identified in trade at 82 per cent. This included 7,263 crocodile and alligator specimens (77 per cent of total specimens) and 497 snake specimens (five per cent of specimens). The majority of these reptile specimens were parts and products rather than live animals. Crocodiles and snakes were the most numerous specimens for sale by traders stating they were based in South Africa and Nigeria, bolstered by individual wholesale traders in South Africa offering large quantities of Nile crocodile belts, wallets and bags for sale. Captive-breeding of crocodiles for the leather industry is legal in South Africa, which could explain this high figure. South African sellers also offered 122 live snakes for sale, including many Dumeril's boa and ball python specimens.

Mammals

Mammals were featured in over half of all advertisements identified in this survey, and were the second most numerous specimens offered for sale, considering the total number of items offered across all advertisements.

Elephant products were the highest number of mammal specimens for sale, with 876 specimens offered in advertisements. This included South African sellers offering 765 elephant hair bracelets as well as a number of ivory jewellery items, sculptures and whole tusks. Without access to the physical product, researchers were unable to verify whether the bracelets were made from genuine elephant hair.

In total, 123 cat specimens were offered for sale including live lions, tigers, cheetahs and caracals. Lion, cheetah and leopard products such as skin and taxidermy were also listed in adverts, as well as lion claws.



Researchers also found 54 giraffe, 41 primate, 30 whale and 27 rhino specimens including live white rhinos and black and white rhino horn for sale.

Ivory and suspected ivory advertisements

Ivory derives from the teeth and tusks of various animals including elephant, hippo, whales, walrus and narwhal.

In this report, we have categorised all ivory items under their relevant species category - i.e. as elephant, hippo, whale specimens, etc. However, a small additional category of 'suspected ivory' advertisements and specimens includes items which traders identified as ivory and items which, in our informed belief, are likely to be made up of ivory, but where in both instances we have been unable to identify the species the ivory came from.

In total, IFAW identified 63 ivory and suspected ivory advertisements including 28 identified as elephant ivory, 14 as whale ivory, four as walrus ivory, one as hippopotamus ivory and 16 advertisements where we were not able to identify the species. We also identified a few examples of where traders may be seeking to disguise their ivory through the use of code words such as 'ox bone' or 'faux ivory'.

Ivory only featured in six per cent of advertisements - a very small amount compared to other IFAW research of non-African countries. However, ivory items represent some of the most expensive items for sale in this survey, with one advert on www.alibaba.com offering 10 tusks for sale with an asking price of US \$1.4 million.

Birds

Birds were the third most common species to feature in advertisements and the third most numerous in terms of specimens offered across all advertisements.

In terms of total bird specimens for sale, parrots were the most common with 386 birds. Almost all the advertisements were for live animals including cockatoos, macaws, Meyer's parrots, African greys and Senegal parrots, as well as more unusual species such as Red, White and Yellow-tailed black cockatoos.

Researchers also identified a small number of live ostriches and birds of prey. African grey parrots were uplisted to Appendix I at CITES CoP17 and now therefore receive a higher level of protection than at the time of this research.

Molluscs and fish

IFAW researchers also found a small number of advertisements for protected fish species including live CITES Appendix I-listed Asian Arowana fish and sawfish products as well as five mollusc advertisements for giant clam shells.

Online marketplace hosting trade

Online marketplace trade on the majority of trade identified in this research, hosting 887 advertisements (95 per cent).

International eBay often hosted the most trade in terms of the number of advertisements, with South African sellers posting 352 advertisements, making up the 35 site, representing 39 per cent of overall trade. Twitter's South African site was the second highest platform for trade, hosting 87 advertisements. Both eBay and Twitter have policies prohibiting illegal trade in wildlife on their platforms.

The 26 group featured in three different countries in this research, with 72 advertisements in total at www.olx.co.za (South Africa), www.olx.co.uk (Netherlands) and www.olx.com.ng (Nigeria). The 26 group is a network of classified platforms in 45 countries³. The sites have also been identified as hosting wildlife trade in other IFAW research in Belarus, Kazakhstan, and Poland. All 26 sites identified in this research have a policy on their websites stating that animals considered to be endangered under any local or international laws may not be sold.

Social media - an emerging threat

Although social media platforms only hosted 15.4 per cent of trade in this survey, as identified in previous IFAW reports, social media is an emerging threat to endangered wildlife and should be monitored. In a 2016 IFAW study of online wildlife trade in China's cities, social media platforms and forums were responsible for over half of the trade identified compared to online marketplaces, reflecting a broad change in the online shopping habits of Chinese consumers. Social media platforms have also featured in the most recently, after a 2016 Wildlife Justice Commission investigation in Thailand uncovered a criminal network using Facebook and WeChat as part of their operations to sell illegal wildlife products worth US \$3.7 million.

3. <http://www.joinolx.com/this-is-olx-group/facts-figures->



African grey parrots

Of the social media platforms researched in this survey, Facebook hosted the most trade with 71 posts, representing seven per cent of overall trade or 88 per cent of trade via social media.

The social media posts identified by researchers are likely to be an underestimate of actual items for sale on all social media platforms. Social media is defined by the Oxford English Dictionary as 'websites and applications that enable users to create and share content or to participate in social networking'. Such applications are focused on communication and, unlike online marketplaces, are not specifically designed to facilitate online trade, although some marketplaces are introducing trading forums. Therefore, measuring the scale and nature of wildlife trade across these diverse platforms is much more challenging.

Communication over these platforms takes many forms with a variety of different privacy settings, making a standardised search method much harder to apply in practise. For example, users can communicate to anyone with Internet access, or selected 'friends' or 'followers' or via closed groups. They may choose to communicate using untraditional language (such as using the hashtag sign followed by a series of words) or they may only communicate using an image. Identifying when an item is being offered for sale or when the item is being traded is also far less clear than over online marketplaces. Often determining the location of an item for sale is very difficult unless the seller provides details or a post is 'geo-tagged', i.e. the location of the trader is tagged in the post,

which is unusual, thereby making searching for wildlife advertisements very time-consuming.

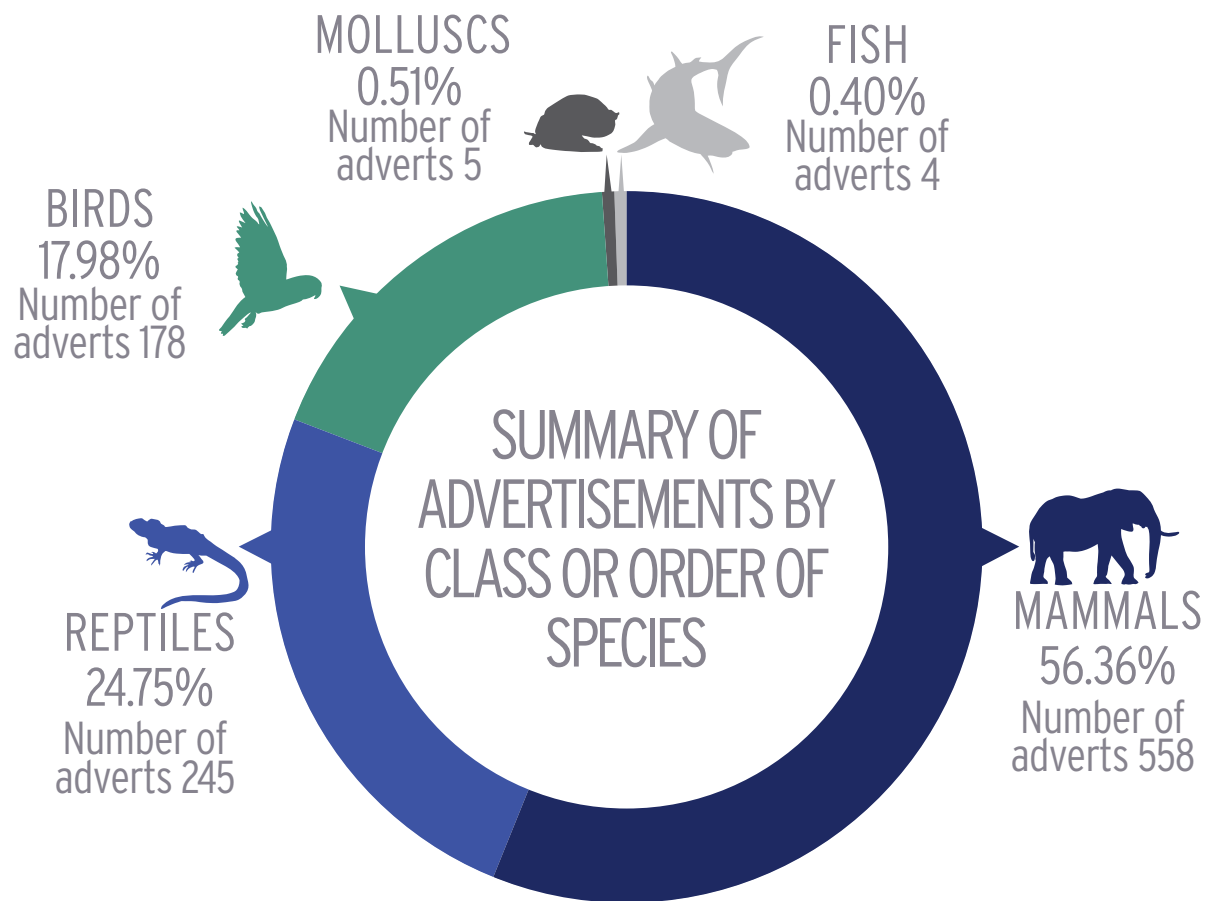
IFAW has worked with experienced law enforcers to help ensure that their offline investigative experience can be applied to the online environment, in order to best identify wildlife traders operating over social media platforms. One major benefit for enforcers from investigating online wildlife trade over social media platforms is the ability to quickly identify social, and therefore possibly trafficking, networks.

Advertisements handed over to enforcers:

In total, 33 information logs representing 392 advertisements were shared with national enforcers across the countries studied. One information log can include multiple advertisements posted by one seller; therefore, the scale of potential illegality is more significant than the information logs total would suggest.

In addition to assessing trends in the online trade to inform future advocacy and policy, IFAW's priority in this research was to identify traders who may be worthy of further investigation. The bar for providing information logs for enforcers was set high, given the resources required for a follow-up criminal investigation. Therefore, the information logs focused on traders of which there was potential evidence of illegality.

SUMMARY RESULTS continued



1. Animals and products available for sale:

| Category | Total ads | Per cent ads | Total specimens for sale in ads | Per cent specimens |
|----------|-----------|--------------|---------------------------------|--------------------|
| Reptiles | 245 | 24.75% | 7798 | 82.25% |
| Mammals | 558 | 56.36% | 1244 | 13.12% |
| Birds | 178 | 17.98% | 417 | 4.40% |
| Molluscs | 5 | 0.51% | 15 | 0.16% |
| Fish | 4 | 0.40% | 7 | 0.07% |
| TOTAL | 990 | 100.00% | 9481 | 100.00% |



Nile Crocodile

2. Country summary for animals and products:

| Country | No of ads | No of specimens for sale in ads | Live animal specimens | Parts and product specimens for sale | No of online marketplace platforms | No of social media platforms | Information logs provided to enforcers | Value in US \$ |
|--------------|------------|---------------------------------|-----------------------|--------------------------------------|------------------------------------|------------------------------|--|--------------------|
| South Africa | 718 | 8452 | 422 | 8030 | 16 | 3 | 19 | \$3,876,102 |
| Nigeria | 219 | 905 | 239 | 666 | 11 | 3 | 8 | \$1,947,916 |
| Kenya | 29 | 59 | 47 | 12 | 3 | 0 | 0 | \$3,804 |
| Ivory Coast | 17 | 46 | 2 | 44 | 0 | 1 | 6 | \$199 |
| Tanzania | 4 | 15 | 15 | 0 | 1 | 0 | 0 | \$375 |
| Uganda | 2 | 3 | 1 | 2 | 1 | 0 | 0 | \$52 |
| Ethiopia | 1 | 1 | 0 | 1 | 1 | 0 | 0 | \$160 |
| TOTAL | 990 | 9481 | 726 | 8755 | 33 | 3* | 33** | \$5,828,608 |

* This total figure represents the three social media platforms included in the scope of this research, i.e. Facebook, Instagram and Twitter.

** As one information log may represent multiple advertisements, this figure equates to 392 advertisements.

3. CITES Appendices

| CITES listing | Total ads | Total specimens for sale |
|---------------------|------------|--------------------------|
| CITES Appendix I | 191 | 346 |
| CITES Appendix I/II | 501 | 8184 |
| CITES Appendix II | 253 | 867 |
| CITES Appendix III | 3 | 3 |
| Non CITES | 42 | 81 |
| TOTAL | 990 | 9481 |

10 | RESULTS BY COUNTRY

South Africa

| Country | Number | Total value of ads (USD) |
|---------------------|------------|--------------------------|
| CTES approved | 176 | 400 |
| CTES approved - 0% | 169 | 396 |
| CTES approved - 5% | 40 | 99 |
| CTES approved - 10% | 7 | 5 |
| Not CTES | 10 | 10 |
| Total | 193 | 415 |

Total advertisement tags provided to partners: 16, equating to 176 advertisements.
Total value of ads in USD: \$415,000

Total value of ads in local currency: 12,718,299 South African Rand

| Online businesses | Ads | Per cent |
|-------------------|------------|-------------|
| www.100.com | 162 | 44.33% |
| www.gottel.com | 47 | 12.45% |
| www.100.com | 40 | 10.43% |
| www.100.com | 31 | 8.04% |
| www.100.com | 20 | 5.32% |
| www.100.com | 20 | 5.32% |
| www.100.com | 20 | 5.32% |
| www.100.com | 19 | 5.11% |
| www.100.com | 9 | 2.35% |
| www.100.com | 9 | 2.35% |
| www.100.com | 7 | 1.83% |
| www.100.com | 7 | 1.83% |
| www.100.com | 7 | 1.83% |
| www.100.com | 7 | 1.83% |
| www.100.com | 7 | 1.83% |
| www.100.com | 7 | 1.83% |
| www.100.com | 7 | 1.83% |
| Total | 366 | 100% |

| Online businesses | Ads | Per cent |
|-------------------|-----------|--------------|
| www.100.com | 17 | 4.64% |
| www.100.com | 10 | 2.61% |
| www.100.com | 7 | 1.83% |
| Total | 34 | 8.67% |

A being online doesn't

Traders stating they were based in South Africa posted, by far, the most advertisements during this survey with 716 advertisements identified, offering a total of 8,402 wildlife specimens for sale. The majority of these were parts and products rather than live animals – 80 per cent.

Some of these advertisements were posted by South African traders on often trusted outside of the country such as www.100.com and www.100.com, offering their parts for international sale to those regions. For such international trade to go ahead legally these traders would need to possess a relevant CITES permit. It would also be an offence under South

African law to offer CITES-listed species for sale which were not legally acquired.

Examining the legality of products for sale online is challenging, with no physical access to the item and with little or limited information provided about the animal, part or product. As in other countries in this survey, often sellers make no mention or provide evidence of any documentation that may be required for a sale under national or provincial law.

Only 286 out of the 716 advertisements (40 per cent) referenced supporting documentation for their items for sale, e.g. that the sellers have a relevant CITES animal permits for a sale issued under the

| Subcategory | Local advertisements | Foreign and overseas advertisements | Total advertisements | Locality breakdown | Local product only | Foreign and overseas only | Total only | Total No. ads |
|--------------------------------|-------------------------|---|-------------------------|-----------------------|--------------------------|---------------------------------|------------|------------------|
| Antelope | 1 | 1 | 2 | 0.500% | 1 | 1 | 2 | 0.00% |
| Asian elephants | 1 | 2 | 3 | 0.00% | 1 | 2 | 3 | 0.00% |
| Bird of prey | 2 | 1 | 3 | 0.00% | 2 | 1 | 3 | 0.00% |
| Cat | 55 | 35 | 90 | 1.00% | 55 | 35 | 90 | 0.00% |
| Carnivores and alligators | 4 | 400 | 404 | 60.00% | 4 | 400 | 404 | 0.00% |
| Chimpanzee | 3 | 300 | 303 | 90.00% | 3 | 300 | 303 | 0.00% |
| Elephant ivory | 3 | 25 | 28 | 0.00% | 3 | 25 | 28 | 0.00% |
| Feline | 1 | 2 | 3 | 0.00% | 1 | 2 | 3 | 0.00% |
| Fish (fresh) | 3 | 15 | 18 | 0.00% | 3 | 15 | 18 | 0.00% |
| Goat/sheep | 10 | 10 | 20 | 0.00% | 10 | 10 | 20 | 0.00% |
| Reptile | 2 | 1 | 3 | 0.00% | 2 | 1 | 3 | 0.00% |
| Reptile | 3 | 2 | 5 | 0.00% | 3 | 2 | 5 | 0.00% |
| Suspension animal ¹ | 3 | 10 | 13 | 0.00% | 3 | 10 | 13 | 0.00% |
| Ungulate | 3 | 2 | 5 | 0.00% | 3 | 2 | 5 | 0.00% |
| Ungulate | 40 | 3 | 43 | 1.00% | 40 | 3 | 43 | 0.00% |
| Unspecified | 1 | 2 | 3 | 0.00% | 1 | 2 | 3 | 0.00% |
| Unspecified | 4 | 1 | 5 | 0.00% | 4 | 1 | 5 | 0.00% |
| Unspec | 25 | 2 | 27 | 0.00% | 25 | 2 | 27 | 0.00% |
| Unspec | 3 | 4 | 7 | 0.00% | 3 | 4 | 7 | 0.00% |
| Unspec | 10 | 15 | 25 | 1.00% | 10 | 15 | 25 | 0.00% |
| Unspec and/or other | 1 | 25 | 26 | 0.00% | 1 | 25 | 26 | 0.00% |
| Unspec | 3 | 3 | 6 | 0.00% | 3 | 3 | 6 | 0.00% |
| Unspec | 3 | 10 | 13 | 0.00% | 3 | 10 | 13 | 0.00% |
| Unspec | 2 | 3 | 5 | 0.00% | 2 | 3 | 5 | 0.00% |
| TOTAL | 100 | 1000 | 1100 | 100.00% | 100 | 1000 | 1100 | 100.00% |

¹ All five categories, including the advertisements which we were not able to identify, which appear on every page derived from.

Regulation of Protected Species (RPS) Regulations published in Government Notice 8152 in Government Gazette (MG) on 23 February 2017 read with the National Environmental Management Biodiversity Act 10 of 2004. The majority of these were by traders selling elephant tusk products.

Elephant and reptile products dominate trade

When looking at the number of advertisements, rather than the total number of specimens offered for sale, elephants were the species most commonly featured, accounting for 33% out of 118 advertisements and representing just over half of the trade. Traders claiming to be based in South Africa offered 33% elephant tusks for sale – a large proportion of which were elephant tusk products.

The majority of the 118 specimens offered for sale by traders were offered overseas on Africa's international class particularly the UK. One trader dominated this market with 26 advertisements. Along with other traders, he or she claimed that the elephant tusk were collected after being shot by another in the wild. Expert opinion is that this is not a plausible account. However, we should note that we were unable to verify whether these tusk were made from genuine elephant tusk, as we did not have access to the physical product.

As a result of information provided by ENR, after we were suspended from trading accounts, selling elephant tusk out of South Africa. Since this action was taken, ENR researchers carrying out spot

chairs have not found any elephant hair products on offer other. Other elephant advertisements identified included one on www.alfalaba.com offering up to 10 elephant hair bracelets per month, with no mention of CITES permits, while a second offered for sale 10 elephant hair beaniehats, with an asking price of US \$1.8 million.

Looking at the overall number of specimens offered across all South African advertisements, crocodile dominate the sales, representing 80 per cent of trade. Only 10 advertisements were posted for crocodile and alligator catgut for use as a special medicine for African people and products that these represent 8,362 specimens, mainly for sale on www.alfalaba.com – a site that supplies businesses as well as individual consumers. One company in the southern Cape region offered international buyers a total of 8,280 units of 100 crocodile products including bracelets, belts, wallets and bags, but made no reference in their advertisements to CITES and CITES permits that would be necessary for an international sale to go ahead. The large volume of items for sale is perhaps reflective of South Africa's strong tourism industry having of captive bred crocodile for the leather industry.

What else looked the largest number of advertisements in the survey with 10 per cent of trade on online marketplaces. Twitter was the second most popular site with 10 advertisements representing 10 per cent of trade. Traders on the site posted 17 items and accepted every advertisement including for culture sculptures and jewelry as well as several whole elephant tusks, which the traders asserted in the advertisements were legal. One seller also offered two live elephant cubs for sale, with no mention of any permits required to sell.

Rhinos were the third most common specimens for sale in the survey with 10 items offered for sale, some of which are quite rare and highly valuable. One included one advertisement for Red, White and Yellow backed black crocodiles, an animal indigenous to Australia and international trade in which is highly restricted under CITES.

EW also identified a number of websites selling wildlife, hunting packages and hunting trophies. One website sold live rhinos with a value seemingly based

on age of the rhino and size of the horns. Researchers also identified one advert where a South African seller offered a capacity of 100 live deer horns a year for between US \$2,500 and US \$3,500 each.

Social Media

Fifty two posts in total were identified on South African Facebook, Instagram and Twitter accounts, with Facebook having the most trade including 10 posts. Two thirds of the 10 specimens for sale on social media posts were for live animals rather than wildlife products (66 per cent). The most common items for sale were snakes, particularly BallPython patterns on Facebook. Nearly all of these specimens were thought to be captive bred due to high demand for the distinctive colour and patterns of these snakes, some of which fetch many hundreds of dollars.

One South African hunting company used social media to advertise 10 whole live rhinos and 10 live lion cubs for sale, using Twitter to link to their website. A legal trade in live rhinos and lions is permitted within South Africa, as well as the wearing of wildlife, provided relevant provincial and national permits are in place. The same company also posted eight advertisements for live giraffes, rhinos, lion and lion cubs on their own website during the survey.

Another trader on Facebook advertised the sale of one white and one black rhino horn. Although the seller stated that these were legally registered and documented, as well as not being for export outside of South Africa, trade in rhino horn within the country was prohibited at the time of the survey.

Posts identified on Facebook were mainly for live animals posted in open groups or online communities on a particular subject – in this case, generally related to trading in exotic reptiles and mammals. The groups were open – in groups with an internet use you without the need to be authorized, rather than those that are private or closed. Advertisements on Instagram included footage referencing exotic and luxury wildlife products, whilst the Twitter advertisements were used to direct links to an online marketplace. Two intelligence logs were submitted to local authorities for two advertisements found on social media.

Positive: Strengths of Environmental Sustainability

Environmental sustainability is the ability to meet the needs of the present without compromising the ability of future generations to meet their own needs. It is a holistic approach that considers the social, economic, and environmental aspects of development. The goal is to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

There are several key strengths of environmental sustainability:

- Long-term viability:** Sustainable development ensures that resources are used in a way that does not deplete them for future generations.
- Resilience:** Sustainable systems are more resilient to shocks and stresses, such as climate change and natural disasters.
- Equity:** Sustainability promotes social equity and justice, ensuring that all people have access to the resources and opportunities they need to thrive.

Environmental sustainability is a key component of the United Nations Sustainable Development Goals (SDGs). The SDGs are a set of 17 goals that provide a blueprint for achieving a better world for all by 2030. The goals are interconnected and address a wide range of issues, including poverty, inequality, climate change, and environmental degradation.

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Negative

| Indicator | Value | Target |
|--------------------------|-------|--------|
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |

| Indicator | Value | Target |
|--------------------------|-------|--------|
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |

| Indicator | Value | Target |
|--------------------------|-------|--------|
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |
| CO2 emissions (t/capita) | 15 | 20 |

1. The United Nations Sustainable Development Goals (SDGs) are a set of 17 goals that provide a blueprint for achieving a better world for all by 2030.

2. The United Nations Sustainable Development Goals (SDGs) are a set of 17 goals that provide a blueprint for achieving a better world for all by 2030.

| Category | Live Specimens | Parts and products Specimens | Total specimens | Weekly specimens | Live specimens sold | Parts and products sold | Total sold | Total Revenue |
|------------------------------|-------------------|------------------------------------|--------------------|---------------------|------------------------|-------------------------------|---------------|------------------|
| Birds of prey | 3 | 3 | 6 | 0.00% | 3 | 3 | 6 | 0.00% |
| Cats | 3 | 3 | 6 | 0.00% | 3 | 3 | 6 | 0.00% |
| Crocods | 1 | 3 | 4 | 0.00% | 1 | 3 | 4 | 0.00% |
| Crocodiles and alligators | 3 | 200 | 203 | 0.00% | 3 | 10 | 13 | 0.00% |
| Crocodiles | 3 | 3 | 6 | 0.00% | 3 | 3 | 6 | 0.00% |
| Elephant ivory ¹ | 3 | 3 | 6 | 0.00% | 3 | 3 | 6 | 0.00% |
| Elephants | 3 | 3 | 6 | 0.00% | 3 | 3 | 6 | 0.00% |
| Fish | 3 | 3 | 6 | 0.00% | 3 | 3 | 6 | 0.00% |
| Fish | 3 | 3 | 6 | 0.00% | 3 | 3 | 6 | 0.00% |
| Herons | 100 | 3 | 103 | 16.66% | 70 | 3 | 73 | 0.00% |
| Monkeys | 30 | 3 | 33 | 0.00% | 20 | 3 | 23 | 0.00% |
| Reptiles | 3 | 3 | 6 | 0.00% | 3 | 3 | 6 | 0.00% |
| Snakes | 3 | 200 | 203 | 99.75% | 3 | 20 | 23 | 0.00% |
| Turtles and tortoises | 3 | 3 | 6 | 0.00% | 3 | 3 | 6 | 0.00% |
| TOTAL | 220 | 213 | 433 | 166.66% | 193 | 123 | 316 | 0.00% |

¹ All the categories in this table represent items offered for sale, not sold. No items were actually sold, which appears as zero, both above and below.

These information may provide information useful regarding the specimens.

Total value of sold is 0.00 USD.

Total value of sold is 0.00 USD, 0.00 USD, 0.00 USD, 0.00 USD.

Nigeria hosted the second highest volume of trade in this research, with 103 specimens offered in 20 advertisements, at a total sale price of around two million (2.5) dollars.

Animal parts and products make up majority of trade

Most of the specimens for sale in Nigeria were animal parts and products rather than live species. (76 per cent). Reptiles were the most common species identified, with a total of 203 specimens offered for sale. (37 items, most were snakes, crocodiles and alligator products such as skins, tussocks, tussocks, skulls, etc.). The 103 snake specimens offered for sale were all python species, including both West African pythons.

Birds were the second most common item for sale, including 103 live parrots – mainly African grey and barbet parrots – offered in sales in 73 advertisements. Other attractions were also offered

for sale. Nigerian website populations are listed in Appendix 1 of (2022).

Researchers found a much higher number of petitions for sale in Nigeria than in other countries, with 20 advertisements offering 30. Appendix 2 lists products specimens for sale including skins, skulls, bones, tussocks and python specimens.

Nearly two thirds of specimens identified are listed in (2022). Appendix 3 lists 3.0 per cent), with the remaining third primarily made up of species that are split listed between Appendix 1 and 3.

Online marketplaces were popular than social media

In in South Africa, online marketplaces hosted the majority of trade identified in this survey (88.87 per cent). The most popular online marketplace was www.buzz.com, a classifieds site hosting 73 advertisements representing over a third of overall



Straw Hat gillnet

trucks on online marketplaces. The researchers also, www.strongfishuk.com, that also features in other countries studied in this survey, had equal second place with www.strongfishuk.com, with 26 advertisements each.

Of social media sites, Facebook hosted the most posts, with 27 posts mainly for marine and sea food specimens including crabs and crabs/sea bass, shrimps and walnuts. One seller, claiming to be a self-employed carpenter, offered 21 different sea specimens for sale including walrus, parrotfish, crabs, prawns and walnuts.

Report sellers

Several sellers posted multiple advertisements across online marketplaces and social media including a large based seller with 11 advertisements for parrotfish, marine African goods and a company linked to the dated veterinary hospital above which posted an additional eight advertisements on online marketplaces.

Another seller - which appears to be a tourist goods store - offered 27 advertisements for 67 specimens of mainly marine products including banggai, walnuts and barks on Facebook and online marketplaces.

Seven more sellers were offered for sale on Nigerian websites. Only one of the traders offering a fish for sale stated that the fish was an Atlantic.

Over 95 per cent of the total value of items for sale in Nigeria was represented by three elephant and elephant ivory items for sale, one of which the seller claimed to be a 1000-year old elephant bone carving, advertised for the equivalent of US \$1,588,565. This appears to be an excessive figure for such an item and should be treated with caution.

Researchers also identified a large number of items (five advertisements) on Nigerian sites

Throughout Africa an increased for sale

As in the South Africa research, plants were included from the scope of the work and the final summary data during the Nigerian survey, researchers noticed a significant number of advertisements for specimens of African topiary (17/15). Topiary is a form of plant training in which the growth of a plant is controlled by pruning. Topiary is a form of plant training in which the growth of a plant is controlled by pruning. Topiary is a form of plant training in which the growth of a plant is controlled by pruning.

Ivory Coast

| Whistle category | Total ads | Total specimens for sale in ads |
|-------------------|-----------|---------------------------------|
| CTFC Appendix I | 0 | 0 |
| CTFC Appendix II | 0 | 0 |
| CTFC Appendix III | 1 | 34 |
| CTFC Appendix IV | 1 | 1 |
| Non-CTFC | 0 | 0 |
| Total | 2 | 35 |

| Social media platforms | Posts | Per cent |
|------------------------|-------|----------|
| Facebook | 2 | 100% |
| Twitter | 0 | 0% |

| Subspecies | Total specimens | Ads specimens | Total specimens | Per cent specimens | Total ads | Ads ads | Total ads | Total in ads |
|---------------------|-----------------|---------------|-----------------|--------------------|-----------|----------|-----------|--------------|
| <i>gambianus</i> | 0 | 0 | 0 | 0.00% | 0 | 0 | 0 | 0.00% |
| <i>senegalensis</i> | 0 | 10 | 10 | 28.57% | 2 | 1 | 0 | 0.00% |
| <i>uschi</i> | 1 | 20 | 20 | 57.14% | 1 | 2 | 0 | 0.00% |
| <i>concoloratus</i> | 1 | 0 | 1 | 2.86% | 1 | 0 | 0 | 0.00% |
| <i>roosei</i> | 0 | 0 | 0 | 0.00% | 0 | 1 | 0 | 0.00% |
| <i>pergamus</i> | 0 | 0 | 0 | 0.00% | 0 | 0 | 0 | 0.00% |
| Total | 2 | 30 | 30 | 85.71% | 2 | 4 | 0 | 0.00% |

This information has provided to authorities for monitoring of advertisements.

This research was on 20 5 2020

Total number of ads to total specimens: 35/300 (last through city frame)

Social media – and online marketplaces –

Facebook trade

The Ivory Coast was the only country in this research where no evidence was found of any wildlife trade on traditional online marketplaces, but where social media was found to facilitate trade.

Facebook is the most commonly used social network for buying and selling wildlife in the Ivory Coast. Instagram and Twitter social networks are little known and little used for sales, and no wildlife posts were found on these platforms.

Seventeen wildlife posts were identified on Facebook offering a total of 46 specimens for sale, many of them for whole dead animals rather than live ones. The most common species for sale were big cats but this was mainly due to one seller offering 25 lion cubs for sale.

Bushmeat and traditional medicine sales in nationally protected species

Altogether just six sellers were responsible for the 17 posts identified in this research. Of these, two were the most prolific. One was an individual who claimed on his very public Facebook page to be a traditional healer and practitioner with a variety of animal skins, bones

and live animals for sale, including pangolin skins, lion cubs, leopard skins, a giant forest hog skull and a live crocodile. The seller posted five advertisements in total and claimed to use animal products to treat medicines and spells to help people with money, relationship and health problems.

Another seller who appeared to be a young female posted four advertisements for pangolins, leopards and whole rhinoceros greater cane rats for consumption as a general public purchasing and selling forum page which has almost 60,000 members. Another trader posted five advertisements on the same sales page for selling bushmeat and other foods.

The most common other species listed for consumption in the Ivory Coast include on CTFC Appendix I and II. Researchers included advertisements for greater cane rats also offered as bushmeat, as well as a giant forest hog skull, as these species are protected under Ivory Coast wildlife protection and hunting legislation. Posts for bushmeat reflect an increasing demand since the end of the Ebola crisis in the country. The majority of sellers were based in Abidjan, the economic capital of the Ivory Coast.

Rare social media transcriptional media platform

Field researchers identified a rare social media platform during the course of this research. Through our field research, we discovered that Facebook is a transcriptional media platform with unique characteristics. With our data, we can find users and content in their past location through their mobile phone with an app that is accessible from anywhere in transcriptional media and which groups together and shares advertisements of all types throughout the region.

However, advertisements identified as such have been not included in the data sets for the very first, as articles were found outside the country in Eastern Asia and Africa.

These advertisements were identified through the app, including the platform status with video feeds and live stream video feeds and an additional number of audio feed speakers including articles and evidence for ads. This was done for a time period approximately 15-20%.

Although the numbers of advertisements found in this survey were very small, given the fact that 50 per cent of internet advertisements in Africa are for ads on mobile phones, this app should be monitored as a potential growing platform for trade.

Ramya

| Category | Total ads | Total impressions for ads in ads |
|-----------------|-----------|----------------------------------|
| CTED Appends-1 | 5 | 5 |
| CTED Appends-20 | 4 | 4 |
| CTED Appends-5 | 27 | 27 |
| CTED Appends-10 | 5 | 5 |
| Non-CTED | 5 | 5 |
| Total | 46 | 46 |

| Source/Advertiser/Ad | Ads | Per cent |
|----------------------|-----------|---------------|
| www.rahuladitya.com | 10 | 21.74% |
| www.rahuladitya.com | 5 | 10.87% |
| www.rahuladitya.com | 4 | 8.70% |
| Total | 29 | 62.72% |

| Category | Total ads | Total impressions for ads in ads | Total ads | Total impressions for ads in ads | Total ads | Total impressions for ads in ads | Total ads | Total impressions for ads in ads |
|--------------|-----------|----------------------------------|-----------|----------------------------------|--------------|----------------------------------|-----------|----------------------------------|
| CTED | 4 | 4 | 4 | 4 | CTED | 4 | 4 | 4.00% |
| Non-CTED | 4 | 4 | 4 | 4 | Non-CTED | 4 | 4 | 8.70% |
| CTED | 5 | 5 | 5 | 5 | CTED | 5 | 5 | 10.87% |
| Non-CTED | 5 | 5 | 5 | 5 | Non-CTED | 5 | 5 | 10.87% |
| CTED | 10 | 10 | 10 | 10 | CTED | 10 | 10 | 21.74% |
| Non-CTED | 5 | 5 | 5 | 5 | Non-CTED | 5 | 5 | 10.87% |
| CTED | 5 | 5 | 5 | 5 | CTED | 5 | 5 | 10.87% |
| Total | 27 | 27 | 27 | 27 | Total | 27 | 27 | 62.72% |

Non-CTED Appends-10 are identified by advertisements 10

Total value of ads in ads is 10.00%

Total value of ads in ads is 10.00% (10.00% for ads in ads)

Ramya

| Category | Total ads | Total impressions for ads in ads |
|-----------------|-----------|----------------------------------|
| CTED Appends-1 | 5 | 5 |
| CTED Appends-20 | 5 | 5 |
| CTED Appends-5 | 4 | 4 |
| CTED Appends-10 | 5 | 5 |
| Non-CTED | 5 | 5 |
| Total | 24 | 24 |

| Source/Advertiser/Ad | Ads | Per cent |
|----------------------|-----------|----------------|
| www.rahuladitya.com | 5 | 20.83% |
| Total | 24 | 100.00% |

10. Internet advertisements and internet advertisements in Africa for Ramya Research and the Ramya Research Group (2015). <https://www.rahuladitya.com/eng/ramya-research-and-ramya-research-group>

[illegible]

| UPEU category | Group with | Group with missing for specific group |
|---------------------|------------|--|
| UPEU: Dependent-1 | 8 | 8 |
| UPEU: Dependent-2/3 | 0 | 0 |
| UPEU: Dependent-4 | 4 | 0 |
| UPEU: Dependent-5 | 8 | 8 |
| Mean UPEU | 18 | 8 |
| Control | 20 | 10 |

| Category | Group 1 (2020) | Group 2 (2020) | Group 3 (2020) | Group 4 (2020) | Group 1 (2021) | Group 2 (2021) | Group 3 (2021) | Group 4 (2021) |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Group 1 (2020) | 0 | 0 | 0 | 0% | 0 | 0 | 0 | 0% |
| Group 2 (2020) | 0 | 0 | 0 | 0% | 0 | 0 | 0 | 0% |
| Group 3 (2020) | 0 | 0 | 0 | 0% | 0 | 0 | 0 | 0% |

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| CTD2 binding | Score (z) | Score (non-overlapping) non-overlapping |
|----------------------|-----------|--|
| CTD2, Suppressor-1 | 8 | 8 |
| CTD2, Suppressor-2/3 | 8 | 8 |
| CTD2, Suppressor-3 | 0 | 0 |
| CTD2, Suppressor-4 | 8 | 8 |
| Non-CTD2 | 8 | 8 |
| Control | 8 | 8 |

| Category | Lower primary appointments | Upper primary appointments | Lower secondary appointments | Upper secondary appointments | Lower staff | Upper staff | Lower staff | Upper staff |
|----------|----------------------------|----------------------------|------------------------------|------------------------------|-------------|-------------|-------------|-------------|
| Overall | 2 | 0 | 0 | 0000 | 0 | 0 | 0 | 0000 |
| Female | 0 | 0 | 0 | 0000 | 0 | 0 | 0 | 0000 |



Meyer's Parrot

East African trade

Bird trade in Kenya, very little trade in other East African countries.

Of the East African countries researched, Kenya had the largest number of advertisements with 29 advertisements identified offering 28 wildlife specimens for sale. Of these, the majority were on two online Kenyan marketplaces – www.bayarea.co.ke and www.kenya.co.ke.

In Kenya, two wild birds were by far the most common species offered for sale with 16 advertisements offering 14 birds for sale, none of which made any reference to the legality of the sales. Fischer's lovebirds and Meyer's parrots were the most common birds being identified for sale on Kenyan websites. These species are commonly traded and are indigenous to certain

African countries, but are also commonly captive-bred. However, only one advertisement stated that birds were from a captive-breeding farm.

The second most common species for sale in Kenya were reptiles, with six live lizards offered for sale and six reptile skin products.

Tanzania, Ethiopia and Uganda each only had one website where any trade was identified. From advertisements were received on Tanzania's free marketplace site www.dugustana.com, offering 15 live parrots for sale with no reference to any legal documentation.

No traders from East Africa were found using national Facebook, Twitter and Instagram platforms.

11 | CONCLUSIONS & RECOMMENDATIONS

This report reveals that wildlife trade is taking place over online marketplaces and social media platforms in Africa, where a growing number of people have access to the world's largest marketplace - the Internet. In total, researchers identified 990 advertisements selling 9,481 specimens of endangered and threatened wildlife in seven countries over a six-week research period. Although crocodiles and alligators made up over two-thirds of specimens for sale, elephant, snake and parrot specimens were also offered for sale in significant numbers - with elephant hair items rather than ivory making up the bulk of elephant product advertisements identified.

Our research has shown that South Africa and Nigeria have significant levels of online trade with 718 and 219 advertisements respectively totalling 9,357 wildlife specimens for sale worth US \$5,824,018, with a corresponding higher risk of facilitating illegal wildlife trade. In contrast, Tanzania, Uganda, the Ivory Coast and Ethiopia had very little wildlife for sale online.

Whilst representing a much smaller amount of trade than traditional online marketplaces, social media platforms are being used to host wildlife trade

in South Africa, Nigeria and the Ivory Coast. The scale may be higher than this report indicates as this trade is particularly hard to identify and quantify.

Although it is not possible to tell from the information available to our researchers how many of the total specimens recorded were being traded legally or illegally, 33 information logs representing 392 advertisements in total from this research were handed over to national enforcers for further investigation, regarding sellers stating they were based in South Africa, Nigeria and the Ivory Coast.

Many of the platforms IFAW identified during this research do not offer explicit information to traders about the laws around trade in protected wildlife, in contrast to eBay, Gumtree and Alibaba, which do offer such guidance. Given that wildlife trade continues to threaten the future of many of the world's most endangered species and African consumers have growing access to the Internet and social media, it is essential that online platforms and governments take action to raise consumer awareness and tackle the challenges of online wildlife trade. This includes supporting improved enforcement efforts and national legislation to combat wildlife cybercrime.



African lion



African elephant

Recommendations

If we are to crack down on the growing threat of wildlife cybercrime across the African continent, governments, policy makers, online technology companies and enforcers all have key parts to play and should:

Improve enforcement efforts by:

- Increasing capacity and knowledge through targeted training of wildlife and cybercrime experts and building collaborative enforcement networks to share best practise.
- Carrying out targeted investigations and operations, ensuring that offline cases are linked to online cases where relevant.
- Creating a wildlife cybercrime position in wildlife enforcement agencies that has access to both cybercrime units and intelligence analysts.
- Supporting the implementation of CITES Decision 17.92 Combatting Wildlife Cybercrime by accessing and feeding best practises through INTERPOL's Global Complex for Innovation and the International Consortium to Combat Wildlife Crime (ICCWC).
- Ensuring enforcement officers are encouraged and consulted in the development of more robust legislation.
- Working in partnership with IFAW and other NGOs which can provide information in support of criminal investigations.
- Working with online technology companies to access useful information on traders, and ensuring digital evidence is preserved in line with cybercrime legislation requirements.

Ensure that online marketplaces and social media companies are not a platform for the trade in endangered species, by:

- Pro-actively raising awareness of the threat posed to the survival of endangered wildlife by providing easy to find information on the illegal trade in elephants, rhino, tigers and other protected animals.
- Introducing and implementing clearly communicated and easy to find effective policies that explicitly ban illegal online wildlife trade on their platforms and sign up to the standardised wildlife policy framework.
- Supporting the implementation of CITES Decision 17.92 Combatting Wildlife Cybercrime by sharing best practises with the CITES Secretariat and ensuring policies are effectively implemented.
- Supporting law enforcers in their investigations.

Ensure national legislation protecting endangered wildlife specifically addresses the unique threat posed by online wildlife crime through:

- Placing the legal burden of proof on the seller to provide any necessary supporting documentation and incorporating a requirement for the inclusion of permitting information in all advertisements for CITES-listed species.
- Ensuring enforcers have sufficient powers to carry out an investigation.
- Making the offer of a restricted animal, their part or product for sale an offence.



Funded in 1969, IFAW saves animals in crisis around the world. With projects in more than 40 countries, IFAW rescues individual animals, works to prevent cruelty to animals and advocates for the protection of wildlife and habitats.

For more information, visit **www.ifaw.org**

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Author:

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Acknowledgements:

Charles MacKay (MK Wildlife Consultancy)
Ian Knox (MK Wildlife Consultancy)
Landry Mahi
Damaris Thompson (INL)
Jimmie Mandima (AWF)
Adam Pires (EWT)
Claire Patterson-Abrolat (EWT)
Ashleigh Dore (EWT)
Rikkert Reijnen (IFAW)
Stephen Kinyua (IFAW)
Steve Njumbi (IFAW)
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Dr Joseph Okori (IFAW)
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Celine Sissler-Beinvenu (IFAW)
Mia Crnojevic (IFAW)
Aurore Morin (IFAW)
Daina Bray (IFAW)
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Design and Production:

Flame Design

Printing:

Viking Print

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