

TRAFFIC

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CYBER ENABLED WILDLIFE TRADE

IN CENTRAL AFRICAN COUNTRIES AND NIGERIA

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TRAFFIC REPORT

ABOUT US

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DESIGN

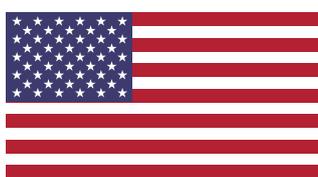
Ain Bukhri



A pair of Vervet monkeys *Chlorocebus pygerythrus*

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**ILLEGAL WILDLIFE TRADE (IWT)
ON THE INTERNET HAS BECOME
AN ISSUE OF GLOBAL CONCERN**



Senegal parrot Poicephalus senegalus

ABBREVIATIONS AND ACRONYMS

| | |
|----------------------|---|
| CITES | Convention on the International trade in Endangered Species of Wild Fauna and Flora |
| COMIFAC | Central African Forests Commission |
| DRC | The Democratic Republic of the Congo |
| ICCWC | The International Consortium on Combating Wildlife Crime |
| ICPO-INTERPOL | The International Criminal Police Organization |
| IFAW | The International Fund for Animal Welfare |
| INL | Bureau of International Narcotics and Law Enforcement Affairs |
| IUCN | International Union for Conservation of Nature |
| IWT | Illegal wildlife trade |
| MINFOF | The Ministry of Forests and Wildlife, Cameroon |
| REC | Regional Economic Communities |
| ReTTA | Reducing Trade Threats to Africa's wild species and ecosystems |
| SLECC | Strengthening Law Enforcement Capacity and Collaboration |
| UNODC | United Nations Office on Drugs and Crime |

EXECUTIVE SUMMARY

ILLEGAL WILDLIFE TRADE (IWT) ON THE INTERNET HAS BECOME AN ISSUE OF GLOBAL CONCERN IN RECENT YEARS.

A series of recent studies have documented instances of IWT online in several African countries, predominantly on classified/ listings platforms. This trade can be difficult to regulate due to the anonymity that the internet provides sellers and the fact that legislation relating to wildlife has often been written to prevent wildlife trade in physical markets rather than online markets. The Strengthening Law Enforcement Capacity and Collaboration (SLECC) project implemented by TRAFFIC aims to support Cameroon's efforts to reduce the ability of criminal groups to carry out illegal wildlife trade. One of the project's objectives is to help monitor, detect, and analyse cybercrime involving IWT for law enforcement action. As part of this project, this study set out to better understand the dynamics of online IWT in Cameroon and other Central African countries to provide information and interception strategies for law enforcement action and policies. Our research team included Nigeria in the survey due to its proximity to Cameroon and other Central African countries and its known role as a trading hub for wildlife.

In a newsletter to the Parties of The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 2010, The International Fund for Animal Welfare (IFAW) stated that trade via the internet is "inherently international." This study utilises the principle of precautionary conservation to assume that all CITES-listed wildlife advertised for sale online has the potential to cross borders; instances of 'IWT online' are defined as cases in which CITES-listed wildlife is offered for sale without mention or display of relevant CITES permits. In this report our team presents an assessment of trade in CITES-listed species on online platforms in Cameroon, Chad, Democratic Republic of the Congo (DRC), Gabon, and Nigeria between March 2018 and June 2021.

The process to collect data for this baseline

assessment was twofold. The first set of data (hereafter referred to as the 'initial surveys') were collected as part of TRAFFIC's Reducing Trade Threats to Africa's wild species and ecosystems (ReTTA) project, which works to identify trends in illegal or unsustainable trade in Africa. Between December 2020 and January 2021, the ReTTA team systematically conducted online market surveys in Cameroon and other Central African countries collecting data on online advertisements of wildlife posted between March 2018 and January 2021. The ReTTA team agreed to share the data from its surveys for this study due to the synergies between the two projects, enabling a comprehensive analysis of online market data. The surveys for the second set of data (hereafter referred to as the 'additional surveys') were conducted between 14-28 June 2021, collecting data posted in online wildlife advertisements for the same online platforms as ReTTA between February 2021 and June 2021. The additional surveys also included advertisements dating from March 2018 to June 2021 for 28 online platforms not previously surveyed by ReTTA.

To ensure we could merge the two datasets for the baseline assessment, our researchers replicated the methodologies used by ReTTA in the initial surveys for the additional surveys. We used Google searches to identify other online platforms for each country, and new platforms found were added to a list previously surveyed by ReTTA. The ReTTA team shared 99 search terms for 23 taxa known to be in demand for the IWT within the region, which we used to search online platforms for advertisements. Target advertisements were those which included a photo of the target species. Data recorded were species name by lowest known taxonomic class; count of the item for sale; the price per item and total value; commodity type; methods of shipment and payment; and search terms used to search for the advertisement.

This report also reviews CITES decisions and

Nigeria is included

in the research due to its known role as a trading hub for wildlife



regional frameworks relating to IWT on the internet to assess the strength of regional policies in preventing IWT online and formulate recommendations for governments. Our team developed a framework for effective national legislation against IWT online from a literature review. Cameroon's legislation is assessed against this as a case study to determine changes needed to ensure law enforcement is equipped to investigate illegal wildlife trade online and penalise offenders.

Between December 2020 and January 2021 and 14-28 June 2021, 72 online platforms were surveyed, resulting in a total of 1267 CITES-listed wildlife products or specimens from a minimum of 43 species found offered for sale within 428 unique advertisements. The largest proportion of species observed for sale by taxonomic class were birds, followed by reptiles, mammals, and plants. Live specimens represented 70% of all online advertisements. The CITES Appendix I listed African Grey Parrot *Psittacus erithacus* was the most common species offered for sale, found in 28% of all online advertisements. The next most common species observed was the CITES Appendix II listed Patas monkey *Erythrocebus patas* and Vervet monkey *Chlorocebus pygerythrus* (3% of all advertisements each). African spurred

tortoises *Centrochelys sulcata*, Senegal Parrots *Poicephalus senegalus*, and CITES Appendix I listed Ostriches *Struthio camelus* each represented 2% of all advertisements.

Reptile skin products, predominantly from crocodiles, were the second most common wildlife commodity observed after live specimens, representing 12% of all online advertisements. The remaining commodities were mainly wooden carvings, furniture and musical instruments. The most common wood species offered for sale was Ebony, predominantly in carvings. Most online advertisements (79%) were observed in Nigeria, followed by Cameroon (16%), Gabon (3%), DRC (2%), and Chad (1%). Live specimens represented most of the online advertisements in Nigeria and Gabon, whereas commodities made from wood were most common in Cameroon, DRC, and Chad.

Most CITES-listed species our team observed for sale are in Appendix II, which are species that have the potential to be legally traded with CITES permits. Two of the most advertised species online, the African Grey Parrot and Ostriches, are in Appendix I, which prohibits commercial trade in wild sourced specimens. A total of 451 live specimens of the African



the most common

species offered for sale on online platforms is African Grey Parrot

Grey Parrot, currently listed as Endangered on the International Union for Conservation of Nature (IUCN) Red List, were observed in online advertisements. One seller offered the Critically Endangered CITES Appendix I listed Blue-throated Macaw *Ara glaucogularis* for sale. This species is native only to Bolivia yet was found advertised on a platform hosted in Cameroon. Only 50-246 individuals of this species remain extant in the wild. It was not clear if the Appendix I specimens for sale were captive-bred.

CITES permits were not visible for any online advertisements observed and only three mentioned CITES paperwork. There was no mention of shipment methods for items in online advertisements in classified/listings platforms and forums, with sales likely arranged through private messaging between buyers and sellers. For online marketplaces and e-commerce platforms, shipment methods were rarely visible without creating an account or input of personal details to make a purchase.

Most species advertised were native to the countries of the online platform hosting the advertisement, with the Vervet monkey, native only to countries in South and Eastern Africa, a common exception. A case study of seller profiles in Cameroon found that 31% of individuals advertising CITES-listed wildlife online were located internationally in countries including China, Cyprus, the United States of America (USA), and the United Kingdom (UK). Out of 428 advertisements, 26 directly stated that worldwide delivery was possible. With 90% of advertisements found on classified/listings platforms, which instruct buyers to meet sellers to exchange and pay for goods, interception of packages poses significant challenges, and proof of sale is difficult to establish. This presents a challenge for law enforcement, who will find it difficult to investigate cases of IWT based solely on online advertisements. Phone numbers were freely

available for most sellers on these platforms. However, many sellers operated with first names or nicknames, making it difficult to establish the identity of those advertising CITES-listed wildlife online.

Policies relating to wildlife trade published by the African Union and the Central African Forests Commission (COMIFAC) are yet to mention wildlife trade online. Despite this, many of their objectives – for example, updating legislation to ensure it can regulate IWT – are relevant to the online domain. Updating these policies to make it explicit that any reference to wildlife trade includes trade online would help to raise awareness of this issue and ensure consistency in approach among Central African countries. The literature review identified several loopholes common in national legislation relating to wildlife trade online within Cameroon. The most significant of these is that wildlife and e-commerce laws rarely make advertising illegal wildlife on the internet a crime. Most wildlife laws relate to the actual purchase or sale of illegal wildlife, which can be challenging to observe if arranged through private messaging functions. To ensure regulation is possible, Central African countries and Nigeria can update current wildlife laws to ensure advertising illegal wildlife for sale online is a crime so that an investigation can be launched, and the sellers penalised. Law enforcement officers could benefit from receiving training to identify common CITES-listed specimens for sale online.

The countries surveyed have a higher rate of growth in internet users than the global average. It is likely that volumes of wildlife trade online will increase as internet penetration rates continue to rise. Current laws and policies relating to trade regulation in CITES-listed wildlife would benefit from updates to ensure they incorporate online trade. Additionally, increasing awareness of CITES permit requirements amongst online sellers and buyers would help to ensure these species can be legally traded within online platforms.

Regional recommendations arising from the findings include:

1. Cameroon and other COMIFAC member countries could adapt The COMIFAC relating to wildlife trade
2. Specific Convergence Plan, and African Union Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Flora and Fauna to ensure online trade is mentioned explicitly in the objectives measures CITES recommends, such as developing a list of CITES Appendix II species most found for sale online in Update to Resolution Conf. 11.3 (Rev. CoP18) could be included in future regional policies. Cameroon and other COMIFAC member countries can use the summary of CITES decisions presented in **Table 7** (page 38) of this report as a tool to determine specific additions needed.
3. Central African countries and Nigeria could consider ratifying The Council of Europe Convention on Cybercrime to facilitate a regionally harmonised response to wildlife trade online and enable more effective access to data required to investigate offenders.
4. Central African countries and Nigeria could encourage the online platforms identified offering CITES-listed wildlife for sale in this report to sign up for the global [Coalition to End Wildlife trafficking Online](#). This coalition partners with experts in wildlife trade to provide online platforms with support for the development and publication of preventative policies, methods for easier identification of illegal wildlife for sale, and advice for increasing user awareness of the legality and CITES permit requirements of wildlife for sale online. At the time of writing, none of the online platforms surveyed had signed up to the coalition.
5. Where they do not exist already, Central African countries and Nigeria could create a unit responsible for investigating, enforcing, and monitoring IWT online within the relevant authorities to enable improved collaboration between countries and ensure a consistent approach. This unit can also help build the capacity of concerned Local Education Agencies, such as Judicial Police Officials of General and Special Competencies, in investigating, profiling, apprehending, and prosecuting identified IWT online traders.
6. The Ministry of Forests and Wildlife (MINFOF) in Cameroon and the relevant authorities within Nigeria and other Central African countries could develop a list of priority CITES-listed specimens from the findings of this and future surveys of IWT online. This list could be shared with law enforcement agencies, ideally with pictures of example specimens and products, to enable easier identification of illegal CITES-listed wildlife for sale online by those responsible for investigating it.

Recommendations relating to Cameroons' national legislation are:

1. Changing the legislation to ensure that advertising CITES-listed wildlife without relevant permits online is made illegal could deter sellers and would enable the application of existing wildlife laws within the domain of online trade.
2. Assessing current Cameroonian laws against the framework for effective legislation presented in **Table 8** (page 40) and recommendations in **Figure 5** (page 42) of this report could guide future changes to legislation, with prioritisation of sections ranked in red in Table 8.



African Grey Parrot *Psittacus erithacus*

RECOMMENDATIONS

TO ENABLE REGULATION OF ONLINE TRADE IN CITES-LISTED WILDLIFE

Although the findings of this survey have shown that trade in CITES-listed species is in its infancy within the COMIFAC countries surveyed, the rate of growth of internet penetration in these countries is high, with an average increase of 128% between 2015-2020, compared to a global increase of 40% (World Bank, 2022). Increased internet penetration may facilitate the movement of wildlife trade into online markets (Nijman et al., 2019). Adaptations to current legislation and policy in this region are needed to regulate online wildlife trade in Central African countries and Nigeria. Additionally, increasing awareness of CITES permit requirements amongst online sellers and buyers would help to ensure these species can be legally traded within online platforms.

ADAPT NATIONAL AND REGIONAL POLICY TO MENTION ONLINE TRADE

Cameroon and other COMIFAC member countries could adapt The COMIFAC *Convergence Plan*, and African Union *Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Flora and Fauna* to ensure online trade is mentioned explicitly in the objectives relating to wildlife trade.

INCLUDE CITES MEASURES IN FUTURE REGIONAL POLICIES

Specific measures CITES recommends, such as developing a list of CITES Appendix II species most found for sale online in Update to Resolution Conf. 11.3 (Rev. CoP18) could be included in future regional policies. Cameroon and other COMIFAC member countries can use the summary of CITES decisions presented in Table 7 of this report as a tool to determine specific additions needed.

RATIFY CYBERCRIME CONVENTION

Central African countries and Nigeria could consider ratifying The Council of Europe Convention on Cybercrime to facilitate a regionally harmonised response to wildlife trade online and enable more effective access to data required to investigate offenders.

ENCOURAGE ONLINE PLATFORMS TO JOIN GLOBAL COALITION

Central African countries and Nigeria could encourage the online platforms identified offering CITES-listed wildlife for sale in this report to sign up for the global Coalition to End Wildlife trafficking Online. This coalition partners with experts in wildlife trade to provide online platforms with support for the development and publication of preventative policies, methods for easier identification of illegal wildlife for sale, and advice for increasing user awareness of IWT online.

CREATE UNIT TO FOCUS ON INVESTIGATIONS AND ENFORCEMENT

Where they do not exist already, Central African countries and Nigeria could create a unit responsible for investigating, enforcing, and monitoring IWT online within the relevant authorities to enable improved collaboration between countries and ensure a consistent approach. This unit can also help build the capacity of concerned Local Education Agencies, such as Judicial Police Officials of General and Special Competencies, in investigating, profiling, apprehending, and prosecuting identified IWT online traders.

DEVELOP AND SHARE LIST OF CITES-LISTED SPECIES WITH

The Ministry of Forests and Wildlife (MINFOF) in Cameroon and the relevant authorities within Nigeria and other Central African countries could develop a list of priority CITES-listed specimens from the findings of this and future surveys of IWT online. This list could be shared with law enforcement agencies, ideally with pictures of example specimens and products, to enable easier identification of illegal CITES-listed wildlife for sale online by those responsible for investigating it.

CHANGES TO LEGISLATION WITHIN CAMEROON

Ensuring that advertising of CITES-listed wildlife without relevant permits online is made illegal could deter sellers and would enable the application of existing wildlife laws within the domain of online trade. Use of the recommendations outlined in Figure 5 in this report can guide further changes to legislation to improve the regulation of wildlife trade online.



INTRODUCTION

The international wildlife trade poses one of the greatest threats to species globally (Symes *et al.*, 2018). In several taxa, the extent of illegal trade is estimated to be greater than legal (Sajeve *et al.*, 2013; Norconk *et al.*, 2020; Tittensor *et al.*, 2020), with recommendations for illegal wildlife trade (IWT) to be recognised as a more severe crime within the framework of countries' national legislative systems (UNODC, 2020). Africa is a vital wildlife source continent for IWT (Esmail *et al.*, 2020). In Sub-Saharan Africa, in particular, it has recently been stated that levels of IWT are increasing and are directly responsible for at least 348 species becoming listed as threatened with extinction (Merem *et al.*, 2018).

Recent studies have documented a concerning trend of IWT moving onto the internet (online) (IFAW, 2008; Lavorgna, 2014; TRAFFIC, 2019a; Esmail *et al.*, 2020; Siriwat and Nijman, 2020; UNODC, 2020). IWT online can be particularly difficult to police, with virtual markets often yet to be adequately regulated, making prevention and detection challenging (IFAW, 2010; UNODC, 2020). When enforcement occurs, traders may move between online platforms, making trade hard to track, and sellers may use private messaging apps to keep trade hidden (UNODC, 2020). Despite this, there has been some success in increasing enforcement for IWT online, with eBay banning worldwide trade in elephant ivory on its platform in 2007 (IFAW, 2010) and other international e-commerce and social media companies introducing similar preventative policies

(TRAFFIC, 2019a). These changes to policies have led to a reduction in ivory offered for sale online (IFAW, 2018).

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) governs the global wildlife trade. CITES is a multilateral, legally binding treaty signed by over 180 states or 'Parties' since 1975 (Ezekiel, 2018; CITES, 2019a). The treaty covers the export, re-export, and import of live and dead animals and plants, their parts, and derivatives, to ensure that international trade in these species is legal, sustainable, and traceable (CITES, 2019a). One of the critical concerns raised regarding CITES regulating online wildlife trade is that the destination of items for sale can be hard to elucidate from online advertisements, with domestic trade beyond CITES' jurisdiction regardless

of the source of the wildlife (UNODC, 2020). The International Fund for Animal Welfare (IFAW) stated in a CITES Newsletter to Parties in 2010 that trade via the internet is “inherently international”. They pointed out that eBay’s decision to ban all trade in ivory products was in line with CITES’ guiding principle of precautionary conservation, given the complexity in determining if the trade is in contravention of domestic laws relating to CITES regulations (IFAW, 2010). IFAW recommended that online trade facilitation in CITES-listed wildlife be treated as an infringement of CITES legislation and penalised accordingly (IFAW, 2010).

Much research into IWT online has focused on South-East Asia and China, perhaps as Asia is home to around 57% of internet users worldwide (Statista, 2021a). A 2017 IFAW report confirmed that IWT online occurs in Africa). More than 9,000 wildlife specimens listed on CITES Appendix I or II, or protected by national legislation were found to be offered for sale over six weeks in Ethiopia, Côte d’Ivoire, Kenya, Nigeria, South Africa, Tanzania and Uganda. The most common taxa offered for sale were crocodiles and alligators, followed by elephants, snakes, and parrots, with smaller amounts of cats and rhinos. Online platforms in Nigeria and South Africa hosted close to 99% of online advertisements, predominantly on e-commerce and classified/listings sites.

Africa had the highest internet growth rate of any continent between 2000 and 2021 (IWS, 2021). Online shopping is a growing sector within African countries, with classified/ listings sites representing close to 70% of online shops (ITC, 2020). Other studies have demonstrated that IWT online occurs in African countries: CITES Appendix I listed Barbary Macaques *Macaca sylvanus* were found offered for sale on classified advertisement platforms within Morocco and Algeria (Bergin, Atoussi and Waters, 2018);

African Grey Parrots *Psittacus erithacus* were found offered for sale in contravention of national legislation and CITES regulations on social media sites within the Democratic Republic of Congo (DRC), Côte d’Ivoire and Nigeria (Martin, Senni and D’Cruze, 2018); CITES-listed reptiles and birds were offered for sale on Facebook in Togo, West Africa without accompanying CITES permits (Harrington *et al.*, 2021).

Despite a lower than average current internet penetration rate of 31% in Central African countries, the average increase in internet users across these countries was 103% between 2015-2020, compared to a rise of 40% globally (World Bank, 2022). Increased internet penetration rates can facilitate increased trade in wildlife online (Nijman *et al.*, 2019). A survey by TRAFFIC in 2017 confirmed that CITES-listed wildlife is being offered for sale online in Central African countries with advertisements found in Cameroon, DRC, and Gabon (Momballa-Mbun, Nguemwo and Floros, unpublished).

Central African countries established a regional partnership named the Central African Forests Commission (COMIFAC) in 2000, aiming to harmonise forest and environmental policies (COMIFAC, 2021). TRAFFIC’s SLECC Project in support of these objectives, funded by the United States (US) Bureau of International Narcotics and Law Enforcement Affairs (INL). The overarching goal of the SLECC project is to gain a better understanding of the dynamics of wildlife trade in Cameroon and neighbouring Central African countries and identify preventative measures for law enforcement agencies and policy makers. Some of the project activities seek to engage the collaboration and cooperation of stakeholders in Nigeria, which is known to play a substantial role in the trade of wildlife products from Cameroon and other Central African countries (TRAFFIC, 2021).



online shopping

is a growing sector within African countries

Central African countries

have seen an average 103% increase in internet use between 2015-2020

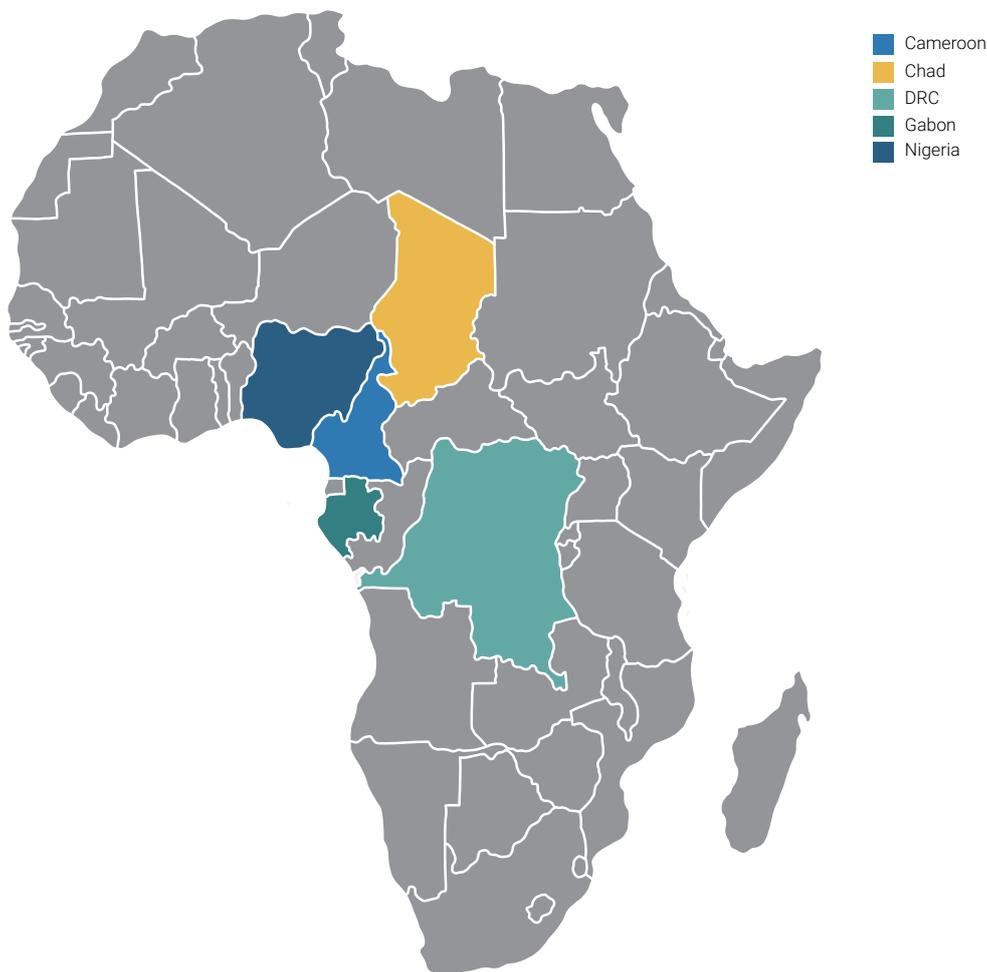
RESEARCH OBJECTIVES

Our research team conducted this survey as part of the SLECC project in collaboration with The Reducing Trade Threats to Africa's wild species and ecosystems (ReTTA) project team, which aims to identify trends in unsustainable trade. The survey provides a baseline assessment of CITES-listed wildlife for sale online in Cameroon, Chad, DRC, Gabon and Nigeria. To determine which Central African countries should be included in the baseline survey, we used results from scoping surveys by ReTTA in 2020 and one-off surveys by TRAFFIC in 2017 and 2019. These surveys found the largest volume of CITES-listed wildlife for sale in Cameroon, Chad, DRC and Gabon, with little or no advertisements

in other Central African countries. (TRAFFIC, 2019b; Momballa-Mbun, Nguemwo and Floros, unpublished). Although not a Central African country, we included Nigeria due to its proximity to these countries and its role as a trading hub for items from Central African countries (**Figure 1**) (TRAFFIC, 2021). Our researchers utilised a precautionary approach for this baseline survey, defining an instance of IWT online as any case in which sellers advertised CITES-listed species without accompanying relevant CITES permits. All online advertisements for CITES-listed species have the potential to result in international and, therefore, illegal trade, given the internet's borderless nature.

FIGURE 1

Countries included in the baseline survey of illegal wildlife trade online



In addition to the baseline survey, our research team conducted a review of international, regional, and national policy and regulatory mechanisms relating to IWT online. We assessed regional policies compared with CITES recommendations and identified gaps and relevant improvements for the regulation of CITES-listed wildlife trade online. We conducted a literature review to create a framework for effective legislation relating to CITES-listed wildlife online. Our researchers used this to assess the strength of national legislation within Cameroon and recommend changes to improve regulation. These recommendations and the baseline survey findings will be shared with law enforcement agencies in Cameroon to improve understanding of the dynamics of IWT online and provide mechanisms for improved regulation. Primary objectives were:

1. Understand which wildlife taxa and commodities are advertised in Nigeria, Cameroon, Chad, DRC, and Gabon and identify the prominent online platforms hosting advertisements within these countries
2. Identify the phrases (search terms) most frequently used for target species on online platforms in Cameroon, Nigeria, DRC, Gabon, and Chad
3. Where possible, identify transport carriers used to move illegal wildlife purchased online from sellers to buyers and the most popular modes of payment
4. Profile the characteristics of sellers involved in advertising illegal wildlife online in Cameroon, including the location of sellers and any indications that illegal wildlife advertised for sale online crosses borders
5. Assess current regional policies compared with relevant CITES decisions and resolutions to guide recommendations for existing regulatory frameworks and collaborations within Central Africa
6. Design a practical framework for regulating CITES-listed wildlife trade online and apply this to national legislation within Cameroon to identify gaps in current laws and areas for improvement.



METHODOLOGY

BASELINE SURVEY

OVERVIEW

The process to collect data for this baseline survey of CITES-listed wildlife for sale online on classified/listings sites, e-commerce, online marketplaces, and forums in Cameroon, Chad, DRC, Gabon, and Nigeria between March 2018- June 2021 was twofold. The ReTTA team collected the first set of data (hereafter referred to as the 'initial surveys'). Between December 2020 and January 2021, the ReTTA team systematically conducted online market surveys in Cameroon, Chad, DRC, Gabon, and Nigeria, collecting data on online advertisements of illegal wildlife posted between March 2018 and January 2021. The ReTTA team agreed to share these data, given the limited time frame within this study to sample advertisements from 2018 to 2021 and substantial synergies between the ReTTA and SLECC project aims. Researchers shared raw data from each survey across teams to comprehensively analyse online trade data for both projects.

Our research team collected the second data set (hereafter referred to as the 'additional surveys') between 14 - 28 June 2021. We replicated the methodologies used in the ReTTA surveys during the additional surveys to

ensure a consistent and systematic approach. ReTTA sampled a sub-section of all possible sites available in each country based on the online platforms mentioned most often in Google search results and those with the highest volumes of advertisement listings. Platforms hosting online advertisements are known to fluctuate and change regularly (Momballa-Mbun, Nguemwo and Floros, unpublished), so for the additional surveys, additional online platforms were surveyed that went beyond those in the ReTTA surveys. For any online platforms previously sampled by ReTTA, researchers collected data on online advertisements of illegal wildlife posted between February and June 2021 to encompass the time frame from the initial surveys to the date our team conducted the additional surveys. For any sites not previously surveyed by ReTTA, we collected data on advertisements posted between March 2018 – June 2021 to match the ReTTA methodology. Some online platforms surveyed by ReTTA did not have dates associated with advertisements; these were excluded from the additional surveys to prevent duplication of results.

SCOPING SURVEY AND PILOT STUDY

Researchers sampled a combination of online marketplaces, e-commerce, classified/listings sites, and forums in Cameroon, Chad, DRC, Gabon, and Nigeria with definition types adopted from the ReTTA survey as follows:

1. Classified/listings sites: the site lists sellers but does not facilitate transactions
2. Online marketplaces: the site hosts third-party sellers and facilitates transactions
3. E-commerce: single or multi-brand online store in which a brand sells its' own product

ReTTA did not define forums, however for the purposes of this study, our team defined them as:

4. Forums: a site that facilitates discussions through posts by community members

We collectively refer to these four platform types as 'online platforms.' ReTTA shared a complete list of all online platforms identified in their Google search, which our team included in the additional surveys. To broaden the sample size from the initial surveys in the additional surveys, we used Google to search using the terms "classified adverts, top e-commerce platforms, online shopping" for each country to identify any additional online platforms. Search results were refined to the first two pages, and all online platforms with a top-level domain code in the country of interest or reported to be operating out of the country of interest were

selected, with 28 additional online platforms identified in total. Eight of these operated in more than one country with different domain codes, for example, www.jumia.cm in Cameroon and www.jumia.ng in Nigeria, resulting in a total of 72 online platforms surveyed, with 49 unique platform and site names. A complete summary of all online platforms surveyed according to each country and platform type is provided in Annex I.

Our team conducted a two-day pilot study of the ReTTA methodology with the number of online platforms searched in four hours – the daily search effort by ReTTA - recorded on each day. We used a list of 99 code names and common phrases for wildlife known to be traded in the countries surveyed supplied by the ReTTA team to search each online platform. The pilot aimed to check the efficiency of the ReTTA methodology and ensure results would be yielded, and determine the overall time required for the additional surveys. Our researchers divided the eight hours equally between each country in the survey to account for variation in the volume of relevant advertisements. We extrapolated the overall average time per online platform to inform the time required for the additional surveys, with four days assigned in Cameroon, three days in Nigeria, two days for DRC, and one day each for Chad and Gabon.

72

total online platforms
surveyed for
the report

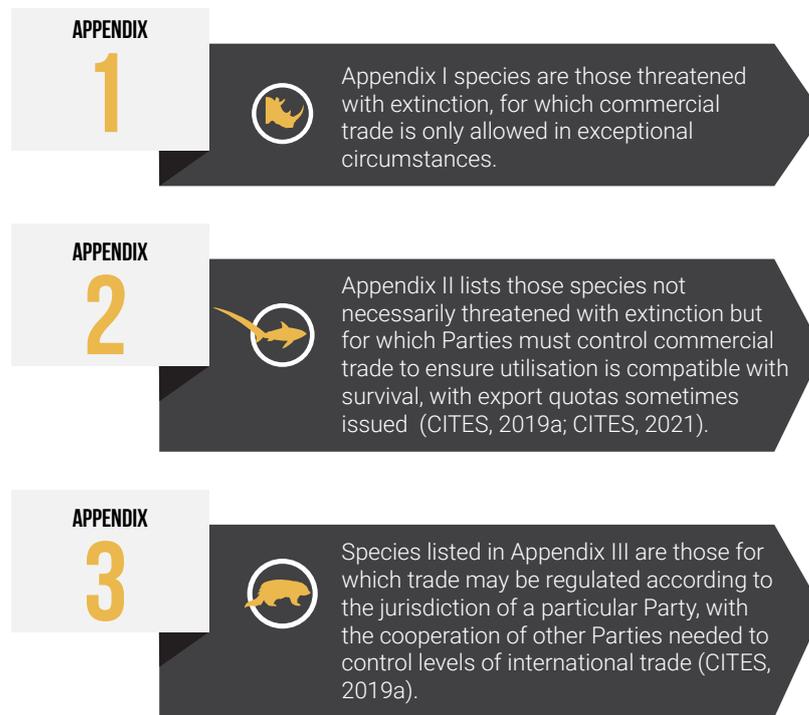
DUPLICATES

After our team merged initial and additional survey data for the baseline survey, researchers carefully reviewed advertisements to eliminate duplicates. Researchers defined duplicates as advertisements with identical descriptions of products from identical sellers within six

months, or identical links to advertisements. In the former case, we accessed links to advertisements and cross-referenced to ensure the seller was identical, either by name or phone number, before confirming duplicate status.

TARGET ONLINE ADVERTISEMENTS

CITES lists species by levels of protection according to three appendices: I, II, and III.



Trade for Appendix I and II species is subject to regulations with the need for Parties to issue export or re-export permits. For permits to be issued, traders must have legally obtained a CITES-listed species (CITES, 2021). IWT covers species illegally obtained or traded without relevant permits (CITES, 2019a; CITES, 2021) and falsification or forgery of documents relating to permits required for relevant appendices (GEI, 2020). Target species included in this baseline survey were any CITES-listed species advertised without accompanying relevant CITES permits.

Our researchers used results from a previous one-off survey by TRAFFIC in Cameroon in 2019 and initial surveys (TRAFFIC, 2019b; Momballa-Mbun, Nguemwo and Floros, unpublished) to generate a list of the most common CITES-listed taxa or species and commodities offered for sale in the five countries in the survey. The list was cross-referenced with a regional expert at TRAFFIC to identify any additional commodities or taxa for inclusion.

These were used as target species and commodities for the additional surveys (**Table 1**).

Only those advertisements which included photographic evidence of the target species/commodity were included in the surveys. For items made of wood which are typically challenging to identify, our team recorded only those advertisements where a target species or taxa was explicitly named. Where other CITES-listed wildlife was encountered, we opportunistically recorded it regardless of whether we had listed it as a target species. For example, our team recorded all parrots (aside from budgerigars, cockatiels, and parakeets), as these are listed in CITES Appendix I or II. For snakes and wood, some species extant in the countries surveyed are CITES listed, with others non convention. In line with the precautionary approach taken in this baseline assessment, it was assumed that species within these taxa observed offered for sale were CITES-listed. Ebony wood was selected as a target species despite only the populations of Madagascar being listed on CITES Appendix II based on recommendations

of regional experts within TRAFFIC. Some advertisements were suspected to include CITES-listed wildlife but could not be identified to the taxonomic level required to confirm this. We recorded these advertisements and later

verified or excluded them, collaborating with species specialists at TRAFFIC, International Animal Rescue (IAR) Indonesia, and staff at Oxford Brookes University. Additionally, all reptile skin and timber products were verified for authenticity by specialists at TRAFFIC.

TABLE 1

Wildlife taxa and products most traded in Cameroon, Chad, DRC, Gabon, and Nigeria based on TRAFFIC and CITES data from illegal seizures and previous online surveys conducted by ReTTA and TRAFFIC

| TAXA OR SPECIES | SCIENTIFIC NAME | PRODUCTS COMMONLY TRADED | CITES APPENDIX LISTING | IUCN RED LIST STATUS* |
|----------------------------|-------------------------------|--|------------------------|-----------------------|
| African Grey Parrot | <i>Psittacus erithacus</i> | Live specimens | I | EN |
| African Teak | <i>Pericopsis elata</i> | Roundwood, other wood products | II | EN |
| Bubinga wood | <i>Guibourti</i> | Roundwood, other wood products | II | NT, EN |
| Chimpanzee | <i>Pan troglodytes</i> | Live specimens, meat | I | EN |
| Crocodile | <i>Crocodylus</i> | Skin pieces, leather products, shoes | I/II | LC, VU, CR |
| Ebony wood | <i>Diospyros</i> | Roundwood, carvings | II | LC, NT, VU, EN, CR |
| Elephant | <i>Loxodonta</i> | Tusks, worked and raw ivory, dead specimens, meat, bones | I | EN, CR |
| Gorilla | <i>Gorilla</i> | Live specimens, meat | I | CR |
| Hippopotamus | <i>Hippopotamus amphibius</i> | Carvings from teeth | II | VU, EN |
| Leopard | <i>Panthera pardus</i> | Skins, skulls, teeth | I | VU |
| Lion | <i>Panthera leo</i> | Skins, skulls, teeth | I | VU |
| Monkey | <i>Cercopithecus</i> | Meat, live animals, skulls, trophies, bones | I/II | LC, NT, VU, EN, CR |
| Padauk wood | <i>Pterocarpus</i> | Roundwood | II | LC, NT, EN |
| Pangolin | <i>Pholidota</i> | Scales, dead and live specimens, meat | I | VU, EN |
| Rosewood | <i>Dalbergia</i> | Sawn wood, other wood products | I/II | LC, NT, VU, EN, CR |
| Shark | <i>Selachimorpha</i> | Fins | I/II | LC, NT, VU, EN, CR |
| Snake | <i>Serpentes</i> | Skin pieces, leather products, shoes | I/II | LC, NT, VU, EN, CR |
| Tortoise | <i>Testudinidae</i> | Shells, live | I/II | LC, NT, VU, EN, CR |
| Turtle | <i>Testudines</i> | Shells, live | I/II | LC, NT, VU, EN, CR |

*For taxa not recorded to the taxonomic level of species, all categories relevant to species from these taxa within Sub Saharan Africa are included, with previous surveys having confirmed trade in species not familiar to the region, e.g., Ebony Wood from Madagascar.

LC, Least Concern; NT, Near Threatened; VU, Vulnerable; EN, Endangered; CR, Critically Endangered.

99

search terms

for the 20 target species/taxa and commodities

SEARCH EFFORT AND TERMS

The ReTTA team collated a combination of code terms and common phrases known to be used for each target species/taxa and wildlife commodity within Central Africa for the initial surveys. Our team used these as search terms for the additional surveys, with 99 search terms generated for the 20 target species/taxa and commodities (Momballa-Mbun, Nguemwo and Floros, unpublished). A complete list of search terms used is in Annex 2. Our researchers conducted the additional surveys between 14 - 28 June for four hours per day. Our team searched for each search term on each online platform and reviewed all advertisements until

we reached the maximum look back date for classified/listing sites or forums, which had dates for advertisements. This was February 2021 for online platforms sampled in the initial surveys and March 2018 for those not. For e-commerce and online marketplaces with no dates, we reviewed all advertisements up until the maximum number of pages retrieved for a search. For some sites with no search functions, or search functions in which you could search only by city, our team browsed categories of products most relevant manually for target species for greater efficiency.

DATA RECORDING

For each advertisement, our team collected the following data, where available:

- species name/taxonomic classification – our research team recorded data to the lowest taxa identifiable for each species. For example, an African Grey Parrot, easily recognisable at species level, was recorded as '*Psittacus Erithacus*'. In contrast, we recorded a parrot not identifiable to species level as '*Psittaciformes spp*'.
- the number of each product offered for sale
- the type of product
- value of items; both the total value of the items offered for sale and the value per item. Our team recorded prices per item in USD for comparisons to be made across countries using the Oanda currency convertor¹
- methods of shipment and payment.
- the search term(s) used to find an advertisement for a target taxa or species

ANALYSIS

Our researchers merged initial and additional survey data sets for analysis. We added information on the CITES Appendices² for all wildlife offered for sale. Researchers assigned the most relevant CITES Appendix to those not identified at the species level, assuming that the wildlife was sourced from Central African countries and Nigeria. For example, some snakes within these countries are Appendix I, and others are Appendix II. As a result, unidentified snakes were recorded as 'I/II'. In contrast, all primates local to the region aside from gorillas, chimpanzees, mandrills,

and drills are in Appendix II, so all unknown primates were recorded as 'II.' Our team added additional information for advertisements in which we identified taxa at the species level. Researchers included the global International Union for Conservation of Nature (IUCN) Red Listings³ for endangered status and the native status of the species in the country of the online platform hosting the advertisement. We converted data to a pivot table and generated descriptive statistics to answer each research objective.

1 <https://www1.oanda.com/currency/convertor/>

2 <https://cites.org/eng/app/appendices>

3 <https://www.iucnredlist.org/>

LIMITATIONS

There were several limitations to the study. There was a short time frame of two weeks in June 2021 to collect data for the additional surveys, which was partly overcome by sharing data collected by the ReTTA team for the primary surveys between December 2020 - January 2021. Both surveys utilised a look-back date of March 2018 to capture as many advertisements as possible within the data recording sessions. French was not the first language of our surveyors for the additional surveys, with Google Translate relied upon to convert advertisements written in French into English and online translation tools used to convert lengthier legislative documents into English.

For security purposes, the surveyors for both datasets did not engage with sellers, limiting the extent to which our team could record data on certain items listed as 'price on demand' or exact shipment and payment methods. Not interacting also prevented the surveyors from gaining proof that an item for sale was available for purchase. For example, surveyors were unable to arrange to meet up to transfer goods and ask for additional photos of wildlife for sale. Our team did not use reverse look-up to verify the originality of images with advertisements, as sellers can use stock photos or utilise one photo of their own repeatedly. Surveys of IWT online assume that the product listed for sale exists. However, some advertisements likely represent scams, as previously highlighted in surveys by IFAW of IWT online in Nigeria (IFAW, 2017). It was beyond the scope of this survey to follow up on advertisements to verify the proportion that may be scams, but this is an important avenue for future research.

Without interacting with sellers it was also not possible to ascertain whether a seller had a permit for the sale of the CITES listed

species. If no information was provided on the advert about permits, it was assumed that the sale would be illegal if crossing an international border but in some cases, a seller may have had a CITES permit for a species that they did not explicitly mention in an online advertisement.

Although only 8% of the population in Central Africa use social media (Statista, 2021b), pilot studies by this project and ReTTA identified CITES-listed wildlife for sale on Facebook. Some sellers identified in the survey also mentioned shops on Instagram. A previous survey by IFAW conducted between 2015 and 2016 found advertisements of CITES-listed wildlife for sale online on Facebook, Instagram, and Twitter in Nigeria (IFAW, 2017). Another study identified multiple posts relating to trade in African Grey Parrots in DRC on social media platforms between 2014 – 2017 (Martin, Senni and D'Cruze, 2018). Our research team did not include social media platforms in this survey for several reasons. Instagram is challenging to search because it does not have filters to search by locations; instead it uses hashtags only. The time taken to locate advertisements utilising this method was beyond the scope of this survey. It is against the terms of use of Facebook to create a fake profile, and the use of a surveyor's profile poses a security risk with sellers potentially able to track surveyor activity and access their personal information, inclusive of location. It is essential that law enforcement officers can effectively monitor trade occurring on social media, with traders likely to move platforms to evade enforcement if preventative measures on classified/listings sites improve. Siritwat and Nijman (2020) provide some ethical and practical guidance for surveying Facebook, with further helpful advice on monitoring social media platforms provided by Stringham *et. al* (2021).



**some
adverts**
likely represent
scams

REVIEW OF INTERNATIONAL, REGIONAL, AND NATIONAL POLICY AND REGULATORY MECHANISMS

Our researchers broke down the review of international, regional and national policy and regulatory mechanisms into two parts.

The first provides an assessment of current policies within Central Africa compared to relevant CITES decisions and resolutions to guide recommendations for existing regulatory frameworks and collaborations within Central Africa with the following aims:

1. Summarise CITES recommendations arising from decisions and resolutions relating to wildlife trade online
2. Identify policies relevant to central Africa and assess the extent to which they incorporate CITES recommendations

The second presents a summary of challenges and solutions concerning the regulation of wildlife trade online and their application to national legislation within Cameroon with the following aims:

1. Understand the challenges in formulating legislation relating to wildlife trade online
2. Summarise relevant legislation within Cameroon
3. Identify a framework for effective legislation and assess the strength of current legislation in Cameroon against this.

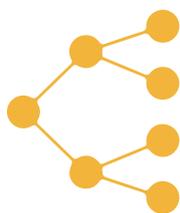
The review will be used to provide recommendations on how to improve policies relevant to Central Africa and outline changes that can be made to legislation within Cameroon. Our team used Cameroon as a case study for the review of national legislation as the primary focus is on IWT in Cameroon within the scope of the SLECC project.

To identify general challenges and develop a framework for effective legislation relating

to wildlife trade online on a global scale, our research team conducted a Google search using the terms 'legislation + 'wildlife trade' + 'internet' and 'legislation + 'cybercrime'. Researchers selected relevant documents and news articles from the first two pages of results. This search was repeated on Google Scholar and restricted to 2017-2021 to access previous studies referencing legislation on wildlife crime linked to the internet. The research team used a snowball approach in both searches to identify sources of any relevant CITES documents, international policies, collaborations, and legislation referenced in the documents and news articles.

To identify relevant CITES decisions and other international policies relating to wildlife trade online, we used the CITES 'Wildlife Crime Linked to the Internet' web page⁴ to access information from related CITES documents and other international agreements, policies, and collaborations. We systematically searched the COMIFAC website to review agreements, projects, and news stories and identify regional policies, actions, and partnerships. Our research team searched each document for key terms, including 'wildlife trade,' 'e-commerce,' 'flora,' 'trafficking,' and 'illegal.' To find any additional regional policies and collaborations we repeated a Google search and Google Scholar search for 'COMIFAC' + 'wildlife trade' + 'legislation' and 'Central Africa' + 'wildlife trade' + 'legislation'.

To identify laws relating to wildlife trade online in Cameroon, our team used Legal Atlas⁵. Researchers carefully reviewed each law to identify legislation broadly relevant to e-commerce, cybercrime, wildlife trafficking, and wildlife protection. Any documents written in French were downloaded and translated to English using an online translator⁶.



snowball approach

was used in searches

4 https://cites.org/eng/prog/imp/wildlife_crime_online

5 <https://www.legal-atlas.net/>

6 https://www.onlinedoctranslator.com/en/translate-french-to-english_fr_en.

RESULTS

BASELINE SURVEY

OVERVIEW

- Our team observed 428 unique advertisements comprising 1267 CITES-listed wildlife items from a minimum of 43 different species
- Advertisements for CITES-listed wildlife occurred in 26 out of 72 online platforms surveyed between March 2018 and June 2021 in Nigeria, Cameroon, DRC, Gabon, and Chad
- Approximately two thirds of advertisements that could be identified to species level were for Appendix II listed species, which have the potential to be legally traded with CITES permits
- We estimated the total minimum value of CITES-listed wildlife offered for sale at USD173,250
- Our team found most advertisements on classified/listings platforms, with far smaller numbers found on e-commerce sites, online marketplaces, and forums (**Table 2**)
- Nigeria accounted for most advertisements (79%) posted in online platforms, with the remaining found in Cameroon (16%), Gabon (3%), DRC (2%), and Chad (1%).



Nigeria accounted
for most
advertisement in
online platforms

TABLE 2

The proportion of CITES-listed wildlife found advertised between March 2018- June 2021 in Cameroon, Chad, DRC, Gabon, and Nigeria according to online platform type

| ONLINE PLATFORM TYPE | NUMBER OF ONLINE ADVERTISEMENTS (%) |
|----------------------|-------------------------------------|
| Classified/listings | 388 (91) |
| E-commerce | 21 (5) |
| Online marketplace | 11 (2) |
| Forum | 8 (2) |

SPECIES AND COMMODITIES OFFERED FOR SALE

The most common CITES-listed species found in online advertisements by taxonomic class were birds. Birds represented 43% of all advertisements, followed by reptiles (27%), mammals (15%), and plants (15%). Live parrots comprised over a third of all advertisements, with most of these African Grey Parrots. Overall, African Grey Parrots accounted for more than a quarter of all advertisements (Table 3). Live monkeys and products from wood were the second most common CITES-listed wildlife observed in online advertisements, followed by crocodiles – both live and reptile skin products – and live tortoises. Most wood products in online advertisements were made from Ebony.

Live specimens accounted for 70% of all online advertisements found. The next most common, reptile skin leather products, represented 12% of all advertisements. Carvings, furniture, and musical instruments made from wood represented 4% of advertisements each. The remaining 2% of advertisements were for a mixture of elephant ivory and hippo teeth tusks, raw timber, and other animal skin products.

Forty-six per cent of items found in advertisements were identifiable at the species level and 42% at the genus level. For the 27 taxa identified to species level, 90% were native to the country of the online platform hosting



live parrots
accounted over
a third of
all adverts

the advertisement. Exceptions in Cameroon included a Hyacinth Macaw *Anodorhynchus hyacinthinus* and a Blue-throated Macaw *Ara glaucogularis*, and in Chad, African Sandalwood *Osyris lanceolata*. In Nigeria, our team observed many non-native species offered for sale, including 12 Vervet Monkeys *Chlorocebus pygerythrus*, eight Nile Crocodiles *Crocodylus*

niloticus, two Green Monkeys *Chlorocebus sabaeus*, and two Grey Crowned Cranes *Balearica regulorum*. Most of these species are native to other countries within Sub-Saharan Africa, with the Hyacinth Macaw native to Bolivia and Paraguay and the Blue-throated Macaw native to Bolivia the only exceptions.

TABLE 3

Total volumes of CITES-listed wildlife found advertised between March 2018- June 2021 on all online platforms surveyed in Cameroon, Chad, DRC, Gabon, and Nigeria according to the lowest consistent taxa and species name

| COMMON GROUP NAME | SPECIES NAME (WHERE AVAILABLE) AND CITES APPENDIX LISTING | SCIENTIFIC NAME | NUMBER OF ONLINE ADVERTISEMENTS (MINIMUM NUMBER OF SPECIMENS) | PERCENTAGE OF TOTAL ONLINE ADVERTISEMENTS SURVEYED (%) |
|-------------------|---|-----------------------------------|---|--|
| Bird | African Grey Parrot (I) | <i>Psittacus erithacus</i> | 117 (451) | 28 |
| | Lovebird* (II) | <i>Agapornis</i> | 16 (124) | 4 |
| | Parrot* (II) | <i>Psittaciformes</i> | 13 (27) | 3 |
| | Senegal Parrot (II) | <i>Poicephalus senegalus</i> | 10 (56) | 2 |
| | Ostrich (I) | <i>Struthio camelus</i> | 9 (73) | 2 |
| | Falcon* (II/I) | <i>Buteo</i> | 5 (18) | 1 |
| | Bateleur Eagle (II) | <i>Terathopius ecaudatus</i> | 1 (2) | <1 |
| | Black Kite (II) | <i>Milvus migrans</i> | 1 (2) | <1 |
| | Blue-throated Macaw (I) | <i>Ara glaucogularis</i> | 1 (1) | <1 |
| | Eagle* (I/II) | <i>Aquila</i> | 1 (1) | <1 |
| | Hyacinth Macaw (I) | <i>Anodorhynchus hyacinthinus</i> | 1 (1) | <1 |
| | Grey Crowned Crane (II) | <i>Balearica regulorum</i> | 1 (2) | <1 |
| | Kite* (II) | <i>Milvus</i> | 1 (2) | <1 |
| Crocodile | Crocodile* (I) | <i>Crocodylus</i> | 37 (50) | 37 (50) |
| | Nile Crocodile (I) | <i>Crocodylus niloticus</i> | 4 (10) | 1 |
| | Dwarf Crocodile (I) | <i>Osteolaemus tetraspis</i> | 3 (7) | 1 |
| Monkey | Monkey* (II) | <i>Cercopithecus</i> | 27 (40) | 6 |
| | Patas Monkey (II) | <i>Erythrocebus patas</i> | 14 (19) | 3 |
| | Vervet Monkey (II) | <i>Chlorocebus pygerythrus</i> | 11 (12) | 3 |
| | Mona Monkey (II) | <i>Cercopithecus mona</i> | 3 (3) | 1 |
| | Green Monkey (II) | <i>Chlorocebus sabaeus</i> | 3 (3) | 1 |
| | Baboon (II) | <i>Papio</i> | 1 (1) | <1 |
| | Moustached Monkey (II) | <i>Cercopithecus cephus</i> | 1 (1) | <1 |
| | Putty Nosed Monkey (II) | <i>Cercopithecus nictitans</i> | 1 (1) | <1 |
| Snake | Snake* (II) | <i>Serpentes</i> | 15 (17) | 2 |
| | Python* (II) | <i>Python</i> | 6 (6) | 1 |

| | | | | |
|-----------------|-------------------------------|-------------------------------|---------|-------|
| Tortoise | Tortoise* (II) | <i>Testudinidae</i> | 32 (59) | 7 |
| | African Spurred Tortoise (II) | <i>Centrochelys sulcata</i> | 10 (57) | 2 |
| | Hinge Backed Tortoise (II) | <i>Kinixys</i> | 5 (10) | 1 |
| Wood | Ebony Wood* (II) | <i>Diospyros</i> | 26 (27) | 6 |
| | Bubinga Wood* (II) | <i>Guibourtia</i> | 14 (37) | 3 |
| | Padouk Wood* (II) | <i>Pterocarpus</i> | 7 (6) | 2 |
| | African Teak (II) | <i>Pericopsis elata</i> | 6 (10) | 1 |
| | Rosewood* (II) | <i>Dalbergia</i> | 6 (6) | 6 (6) |
| | African Sandalwood (II) | <i>Osyris lanceolata</i> | 1 (1) | <1 |
| | Kosso Wood (II) | <i>Pterocarpus erinaceus</i> | 1 (1) | <1 |
| | Mahogany Wood* (II) | <i>Swietenia</i> | 1 (1) | <1 |
| Other | Elephant* (I) | <i>Loxodonta</i> | 7 (7) | 2 |
| | Lion (II) | <i>Panthera leo</i> | 2 (6) | <1 |
| | Antelope* (I/II) | <i>Bovidae</i> | 1 (2) | <1 |
| | Eisentraut's Chameleon (II) | <i>Trioceros quadricornis</i> | 1 (1) | <1 |
| | Hippopotamus (II) | <i>Hippopotamus amphibius</i> | 1 (1) | <1 |
| | Leopard (I) | <i>Panthera pardus</i> | 1 (1) | <1 |
| | Sea Cucumber (II) | <i>Holothuroidea</i> | 1 (1) | <1 |

* Those not identified to species level.

Our research team assigned the CITES appendix according to taxa extant in the countries surveyed. For cases where the taxa were not extant in these countries, we assigned the Appendix or Appendices for all taxa within

Sub Saharan Africa. For cases in which a species was also not extant in Sub Saharan Africa, our team assigned the Appendix or Appendices relevant to these taxa globally.



Hyacinth macaw Anodorhynchus hyacinthinus

VARIATION BETWEEN COUNTRIES IN SPECIES ADVERTISED

There is evident variation between countries in CITES-listed wildlife for sale and wildlife commodity types (Figures 2 and 3). Products from wood comprise most online advertisements in Cameroon (38%), Chad (100%) and DRC (88%). In Cameroon and DRC, wood is used mainly in furniture and in Chad, in carvings. Live parrots were the most common taxa in all online advertisements in Nigeria (41%) and Gabon (56%). Sellers offered live specimens for sale in 83% of all online advertisements in Nigeria and 64% in Gabon. Sellers advertised live specimens for sale in much smaller proportions in Cameroon, with none advertised in DRC or Chad.

The only live specimens offered for sale in Cameroon were parrots, and in Gabon, parrots, and monkeys. A wider variety of live specimens were observed for sale in Nigeria, with parrots most common, observed in 41% of all online advertisements, followed by monkeys (17%) and tortoises (14%). Chad, DRC, and Gabon generally had a lower variety of wildlife offered for sale in online advertisements than Cameroon and Nigeria.

FIGURE 2

Proportion and count of advertisements found according to lowest reported taxa of CITES listed wildlife between March 2018 – June 2021 on all online platforms surveyed in Cameroon, Chad, DRC, Gabon and Nigeria and for all countries combined

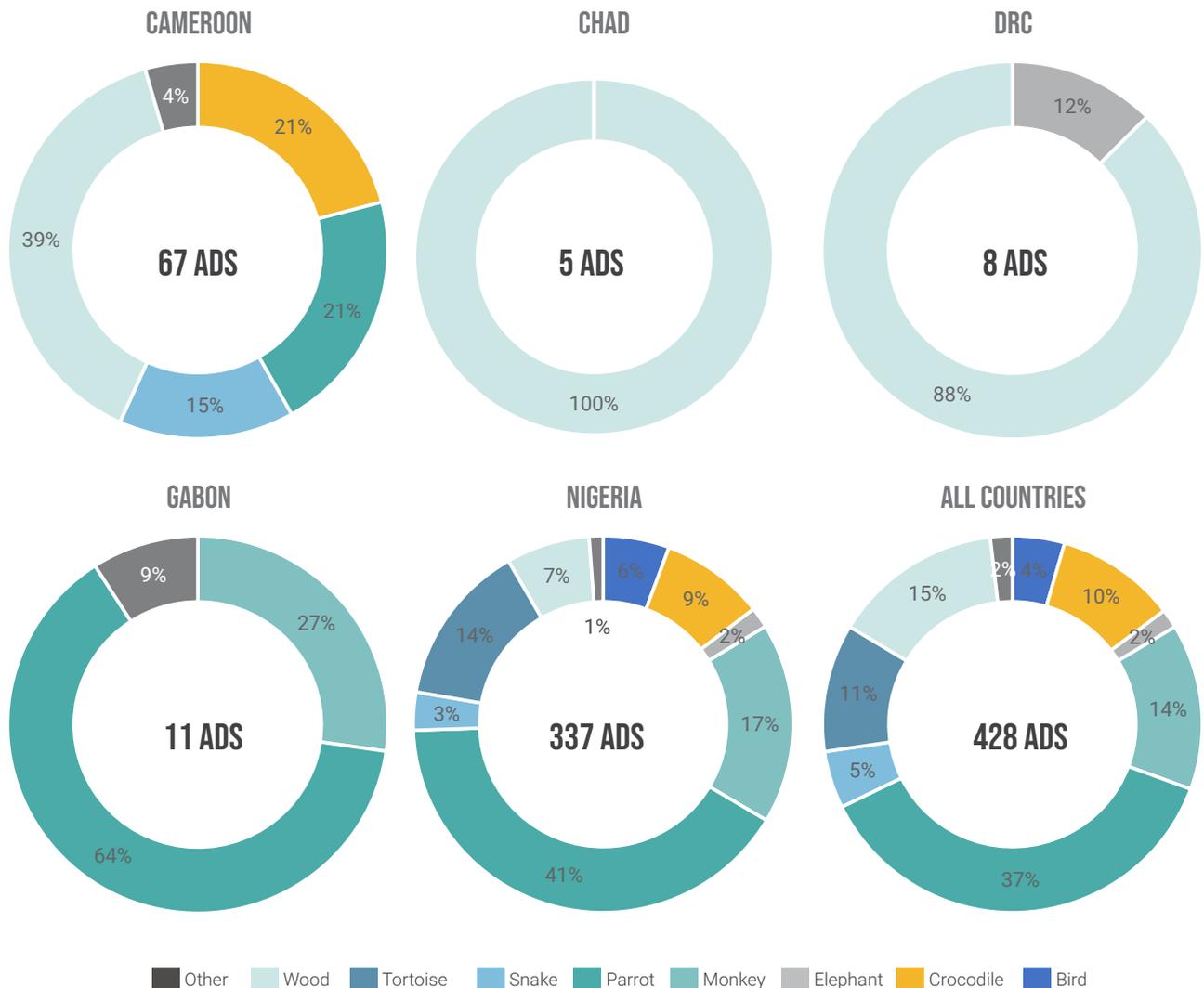
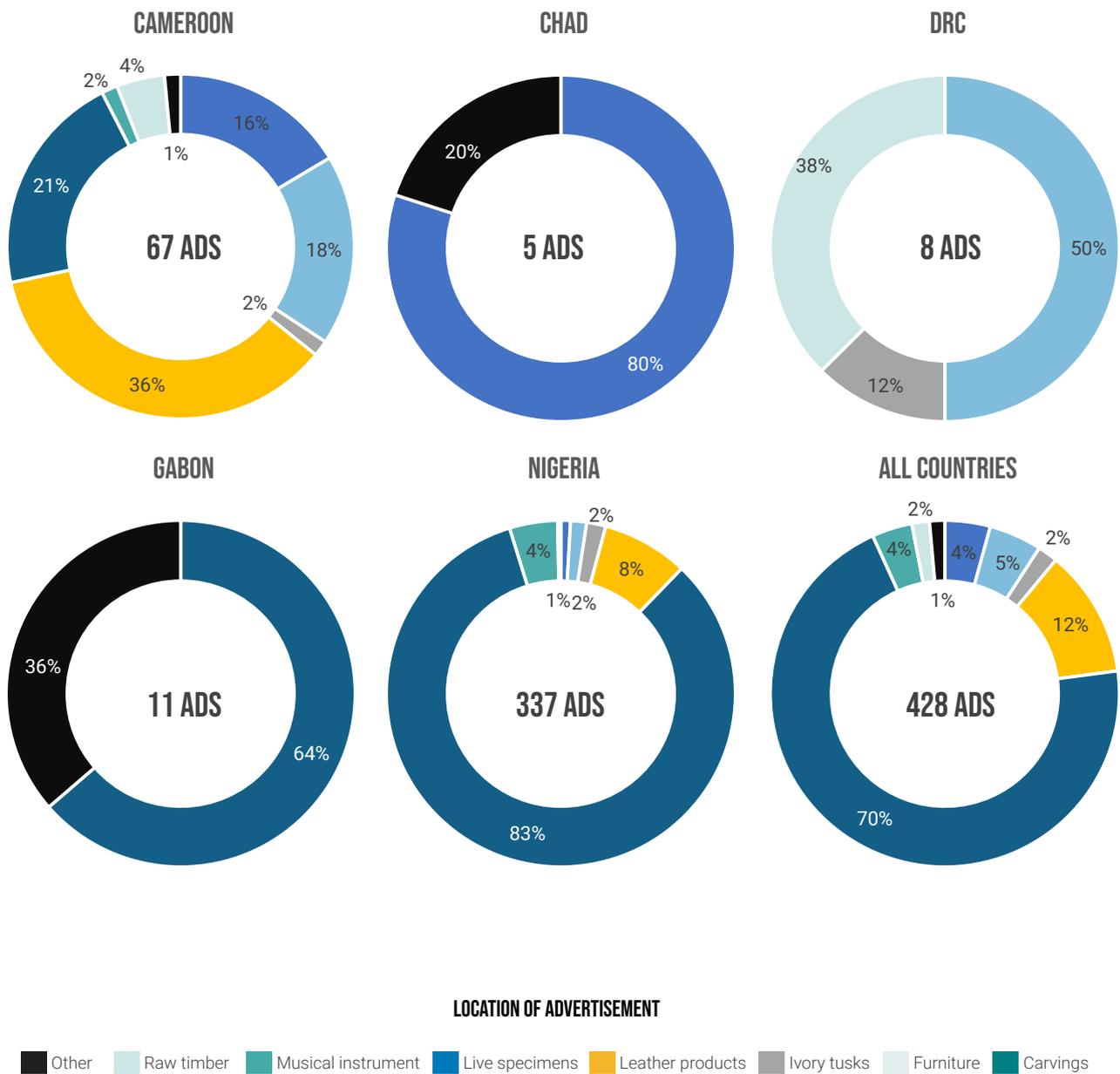


FIGURE 3

Proportion and count of advertisements found according to CITES-listed wildlife commodity type between March 2018 – June 2021 on all online platforms surveyed in Cameroon, Chad, DRC, Gabon, and Nigeria



ONLINE PLATFORMS HOSTING ADVERTISEMENTS

Researchers found 26 online platforms out of the 72 surveyed in Cameroon, Chad, DRC, Gabon, and Nigeria advertising CITES-listed wildlife for sale. The top five online platforms accounted for 84% of all online advertisements found, and our team also found three of these online platforms advertising CITES-listed wildlife for sale in two or more countries (Table 4). Approximately 90% of online advertisements found were on classified/listings sites. These were also more likely to have live specimens for sale, comprising 97%

of all advertisements in this category, with the remaining found on forums. Our researchers did not find any online advertisements for live specimens on e-commerce and marketplaces. Advertisements on these online platforms were primarily for leather items, followed by carvings and kitchenware made from timber species. Our team found online advertisements for CITES Appendix I listed species and those known to be threatened with extinction on classified/listings sites and forums only.

TABLE 4

The volume of online advertisements found on each online platform by country

| ONLINE PLATFORM | ONLINE PLATFORM TYPE | CAMEROON | CHAD | DRC | GABON | NIGERIA | % OF TOTAL ONLINE ADVERTISEMENTS |
|-----------------|----------------------|----------|------|-----|-------|---------|----------------------------------|
| Jiji | Classified/listings | | | | | 145 | 34 |
| Loozap | Classified/listings | 4 | | 2 | 4 | 129 | 33 |
| Jumia Deals | Classified/listings | 9 | | | 3 | 23 | 8 |
| Chuktu | Classified/listings | | | | | 22 | 5 |
| Coinafrique | Classified/listings | 11 | | 2 | 4 | | 4 |
| Zobazo | Classified/listings | 15 | | | | | 4 |
| Kikuu | E-commerce | 9 | | | | | 2 |
| Nairaland | Forum | | | | | 8 | 2 |
| Durrell market | Online marketplace | 6 | | | | | 1 |
| Mossosouk | E-commerce | | 4 | | | | 1 |
| Sellam | Online marketplace | 4 | | | | | 1 |
| Camer Biz | Classified/listings | 3 | | | | | 1 |
| Ekoolo | E-commerce | 3 | | | | | 1 |
| Afribobo | Classified/listings | 2 | | | | | >1 |
| Ajebo market | E-commerce | | | | | 2 | >1 |
| Deluxe | Classified/listings | | | | | 2 | >1 |
| Kusnap | Classified/listings | | | | | 2 | >1 |
| Mediacongo | Classified/listings | | | 2 | | | >1 |
| Payporte | E-commerce | | | | | 2 | >1 |
| Afrimalin | Classified/listings | | | 1 | | | >1 |

| | | | | | | | |
|--------------|-------------------------|-----------|----------|----------|-----------|------------|------------|
| Banabaana | Classified/ listings | 1 | | | | | >1 |
| Daarishop | E-commerce | | 1 | | | | >1 |
| Konga | Online marketplace | | | | | 1 | >1 |
| Locanto | Classified/ listings | | | | | 1 | >1 |
| Wappy | Classified/ listings | | | 1 | | | >1 |
| TOTAL | | 67 | 5 | 8 | 11 | 337 | 100 |

SEARCH TERMS USED FOR ITEMS FOR SALE

Successful search terms for the same species varied slightly between regions, with French terms used more commonly in Cameroon, DRC, Gabon, and Chad and English in Nigeria (Table 5). Some terms were unique to countries, such as the use of the term 'Croco' observed only in Cameroon. Of the 99 terms for target taxa known to the region utilised in searches, only 18 frequently returned results. These were the common terms for the searched items rather than code names. Common names indicate that sellers are likely not attempting to hide CITES-listed wildlife offered for sale online. This was the case even

with higher profile items from CITES Appendix I listed species such as African Grey Parrots and elephant ivory. Searching for specific wood species— for example, 'ebony wood' or 'Bois d'Ebene' instead of 'wood' was more useful in quickly identifying target species on online platforms with large volumes of wood items for sale. In Cameroon, researchers observed that sellers primarily used English terms for wildlife advertised, indicative of an international market for items offered for sale. In the three other principally French-speaking countries of DRC, Gabon and Chad, sellers only used French terms for wildlife advertised.

TABLE 5

Words used as search terms to identify target species and products in online advertisements on online platforms in Cameroon, Chad, DRC, Gabon, and Nigeria between March 2018-June 2021

| TARGET WILDLIFE | SEARCH TERM | | | | |
|-------------------------|----------------------------------|------------------------|------|-----------|------|
| | TIMBER SPECIES | CAMEROON | DRC | GABON | CHAD |
| Live crocodiles | Crocodile, reptiles | X | X | X | X |
| Crocodile skin products | Crocodile, skin | Croco, crocodile, skin | X | X | X |
| Elephant ivory | Elephant | X | | | |
| Hippo teeth | X | Elephant | X | X | X |
| Lion | Lion | X | X | X | X |
| Monkeys | Monkey, pet | X | X | Singe | X |
| Other birds | Birds, bird | X | X | X | X |
| Other live reptiles | Reptiles, reptile | X | X | X | X |
| Parrot | Parrot, bird, birds, pet | Parrot, bird, birds | X | Perroquet | X |
| Live snakes | Snake, reptiles | X | X | X | X |
| Snakeskin products | Skin, snake | Peau, skin, snake | X | X | X |
| Timber species | Wood, bubinga | Bois, wood | Bois | X | Bois |
| Tortoise | Reptiles, tortoise, reptile, pet | X | X | X | X |



METHODS OF PAYMENT AND SHIPMENT

Information on payment and shipping methods was difficult to find without interacting with sellers on classified/listings sites and forums or purchasing items on e-commerce and online marketplace platforms. On classified/listings platforms, payments are made directly through the seller, with modes of payment likely to be stated on contact only. For most of these online advertisements, the phone numbers of sellers were freely available without the need to register details. Only 1% of online advertisements required a login to contact sellers. Only 8% of online advertisements directly stated meeting in person to transfer items. It is therefore unclear for the remaining online advertisements if items would be shipped or delivered in person. However, most classified/listings sites recommended meeting in a public place in their buyer and seller guidelines. Only 3% of online advertisements mentioned payment on delivery with no stipulation on whether a cash payment or another mode of payment was required.



**payment
and
shipping**
information was
difficult to find

For the remaining online advertisements on e-commerce and online marketplaces, accounts usually needed to be created before surveyors could access detailed payment and shipping options. Only 15% of e-commerce and online marketplace platforms mentioned

specific courier and payment services without logging in. Four online platforms stated shipment options: two mentioned domestic shipment services, with the rest stating a combination of international companies. Of three online platforms referring to payment services, one mentioned the use of a payment service unique to Africa, with the remaining referring to international payment services.

It was unclear if the items were available worldwide or only domestically for most online advertisements found. Only 6% of adverts directly stated international shipment was available, and only 5% that items were for domestic shipment only. For e-commerce platforms and online marketplaces, the scope of shipping available may have become clearer upon registering to buy an item and seeing delivery information. Out of the 6% of advertisements that mentioned international options, these varied in scope. One online advertisement in Nigeria mentioned delivery to Ghana and Cameroon. A further three online advertisements stated delivery was available 'worldwide.' One online platform hosted in Cameroon sourced products from mainland China, so shipments operated from China to Cameroon for all nine adverts found.

PROFILE OF THE TOP SIX SPECIES IN ONLINE ADVERTISEMENTS

Of the species identified, the top six most advertised accounted for approximately 90% of all advertisements and were all advertised for sale as live specimens only. Comments from sellers associated with online advertisements for African Grey Parrots, Senegal Parrots, Patas and Vervet monkeys were indicative of sales for the pet trade. Sellers often used product descriptions such as 'friendly,' 'tame,' 'well trained,' 'affectionate,' or 'smart.' African Spurred Tortoises were often referred to explicitly as a 'pet' or described as being 'for your aquarium'. Anecdotal evidence suggests ostriches are used for both meat and as pets (TRAFFIC, personal communication).

Most of these species were native to the country where they were advertised. Vervet Monkeys, advertised in Nigeria but native only to Southeast African countries, are the exception (IUCN, 2020) (**Figure 4**). Typically, Patas Monkeys *Erythrocebus patas* and Vervet Monkeys appeared in advertisements in smaller numbers. Our team observed an average of one individual per online advertisement for these species. In contrast, we observed an average of four African Grey Parrots per advertisement, six African Spurred Tortoises *Centrochelys sulcata*, six Senegal Parrots *Poicephalus senegalus*, and eight Ostriches *Struthio camelus*. Prices varied largely between online advertisements for all top six species observed, but averages were consistently close to or above USD 100 per specimen.

Only four out of the six most advertised species are listed as threatened with extinction by the IUCN Red List, although populations are currently decreasing for all six species. African Grey Parrots and Ostriches are listed under CITES Appendix I, meaning that all commercial trade is banned. Therefore, all sales resulting from online advertisements our team observed for these species are in contravention of CITES regulations. African Spurred Tortoises have a zero-export quota for specimens caught in the wild for commercial purposes for all CITES Parties, making trade illegal without accompanying proof of captive-bred origin in addition to CITES permits. Vervet Monkeys also require re-export or export permits for legal trade given their non-native status, and all other species should have export permits. There may also be a need for additional permits relating to national legislation, which varies by country. In Cameroon, for example, all CITES Appendix I and II species are protected under national legislation, which means that sellers require a certificate of origin even for movement within the country (Republic of Cameroon, 1994). The capture of CITES Appendix I species, or infants of species in Appendix I or II, is not allowed for commercial purposes. Sellers require a license to capture Appendix II species (Republic of Cameroon, 2006).



ostriches
are sold as pets
and for meat



African Spurred Tortoises *Centrochelys sulcata*

SPECIES FOR SALE BY PROTECTION AND ENDANGERED STATUS

9
species
at least
are listed as
CITES Appendix I

Out of the 27 specimens identifiable to species level observed in online advertisements, 91% of all species are listed as threatened with extinction by the IUCN Red List, with 86% of these listed as Endangered and the remaining Vulnerable (IUCN, 2020). Most species identified for sale are CITES Appendix II Listed (Table 6), but at least nine species are listed as CITES Appendix I, with 87% of these assessed as Endangered. Only one species advertised, the Blue-throated macaw, is listed as Critically Endangered. This species was advertised on an online platform in Cameroon but is native to Bolivia. An estimated 50 - 246 individuals remain in the wild, with any levels of poaching likely to be severely detrimental to species survival. The African Grey Parrot was the most common CITES Appendix I species for sale. Out of the 428 online advertisements our

researchers observed, only three for African Grey Parrots in Cameroon mentioned CITES paperwork. A further seven advertisements for a variety of bird species offered for sale in Nigeria and Cameroon mentioned licenses or paperwork in more general terms. None of the online advertisements for CITES-listed wildlife our team observed during the survey displayed CITES permits.

Crocodiles, tortoises, parrots, and monkeys were the taxa most often not identified to species level. Most of these taxa have some species in the countries surveyed listed under CITES Appendix I, meaning that researchers may have underestimated the proportion of Appendix I listed species.

FIGURE 4

The top 6 CITES-listed species observed in online advertisements on all online platforms surveyed in Cameroon, Chad, DRC, Gabon, and Nigeria between March 2018-June 2021; researchers observed all offered for sale as live specimens

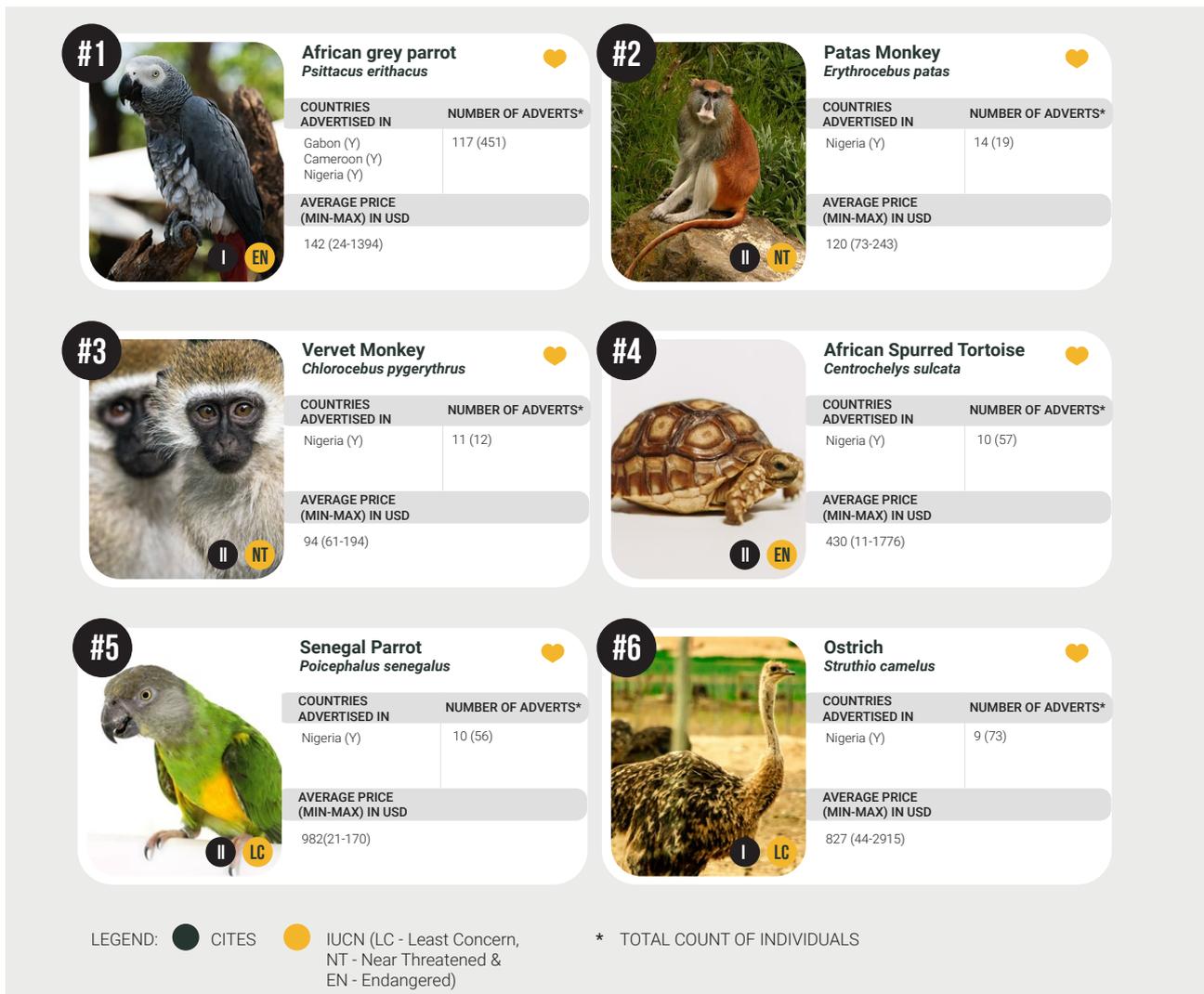


TABLE 6

CITES status of species offered for sale in online advertisements on online platforms in Cameroon, Chad, DRC, Gabon, and Nigeria between March 2018 - June 2021

| CITES APPENDIX LISTING | PROPORTION OF ONLINE ADVERTISEMENTS (%) | TOP FIVE SPECIES OBSERVED FOR SALE IN APPENDIX (% OF OVERALL ONLINE ADVERTISEMENTS FOR THIS APPENDIX) | | | | | MINIMUM NUMBER OF SPECIES |
|------------------------|---|---|------------------|----------------------|--------------------|---|---------------------------|
| | | 1 | 2 | 3 | 4 | 5 | |
| Appendix I | 35 | African Grey Parrot (81) | Ostrich (6) | African Elephant (5) | Nile Crocodile (3) | Dwarf Crocodile (2) | 9 |
| Appendix II | 63 | Ebony wood (10) | Bubinga wood (5) | Patas Monkey (5) | Vervet Monkey (5) | Senegal Parrot and African Spurred Tortoise (4) | 28 |

CAMEROON – A CASE STUDY OF SELLERS

A total of 46 sellers posted 67 online advertisements within Cameroon, with most sellers posting one advertisement each. Only eight sellers posted multiple online advertisements, ranging from a minimum of two and a maximum of six. In each of these cases, the seller’s CITES-listed wildlife offered for sale was the same or similar in each advertisement. One seller advertised wood products only, another snake or crocodile skin products, and another two different parrot species, while the rest only sold one species. None of these sellers were observed posting on more than one of the online platforms surveyed. Most sellers did not state that any wildlife other than those species visible in the advertisement were available. However, nine sellers on one online platform offering parrots for sale mentioned additional wildlife available in some context. In four of these cases, the sellers stated other CITES listed bird species were available, ranging from four to nine species in total. In the other cases, the seller stated more of the same species were available, and in three cases, the opportunity to buy eggs of the species concerned was available.

Most sellers (69%) were individuals, with a further 13% hosting online stores within online marketplaces and 6% on classified platforms having company names. The remaining online advertisements occurred on e-commerce platforms, with no individual sellers listed. Photos of sellers were rarely available. Most classified/listings platforms have an option for a profile picture, but our team observed this used by just one seller. Around 60% of individual sellers used their full names for listings, with others using nicknames or first names only. Researchers identified seller country locations by country codes associated with phone numbers or locations of online stores in marketplaces, and this information was available for two-thirds of

all sellers. Of these, 67% came from Cameroon, 20% from mainland China, 9% from the US and 2% from the UK and Cyprus.

For the sellers in Cameroon, information on location by the city was available for 29 sellers, with this stated by sellers in advertisements. Most of these were in Douala (38%) or Yaoundé (31%). All international sellers hosted online advertisements on just two online platforms, with the headquarters of one platform based in mainland China and another platform in the UK. The platform based in China connected suppliers in China with buyers in Cameroon, with CITES-listed wildlife for sale including Ebony carvings and crocodile and snakeskin leather products. This platform additionally had domain names in eight other African countries.

The platform with headquarters based in the UK operates in over 110 countries, each with national domain names to connect sellers and buyers. On this online platform, 15 advertisements offering CITES-listed wildlife for sale were observed, with 13 of these for CITES Appendix I listed species of parrots for which commercial trade is only allowed in exceptional circumstances. Most of these were for African Grey Parrots, with one Hyacinth Macaw and one Blue-throated Macaw. Sellers in six out of the 15 advertisements listed phone numbers with country codes; four were based in the US, one in the UK and one in Cyprus. No CITES permits were displayed or mentioned in these six advertisements, although the seller from Cyprus mentioned that the African Grey parrot advertised came with ‘all paperwork.’ In the remaining nine advertisements for which seller locations were unknown, only two for African Grey Parrots mentioned CITES paperwork but did not refer to the exact permits required.



seller country locations

were identified by country codes associated with phone numbers

REVIEW OF INTERNATIONAL, REGIONAL, AND NATIONAL POLICY AND REGULATORY MECHANISMS.

CHALLENGES RELATING TO REGULATING IWT ONLINE

Legislation relating to wildlife trade is often conservative and, therefore, not applicable to the fast-developing and changeable domain of wildlife trade online (Siriwat and Nijman, 2020). This issue is compounded by inconsistent regulation between regions and limited specialised law enforcement capacities to tackle the global nature of the trade (IFAW, 2008; UNODC, 2020). Wingard and Pascaul (2018), working as part of the Global Initiative

Against Transnational Organized Crime, have provided a comprehensive summary of the main challenges in legislating against IWT online that draws upon three prime sources: a review of wildlife trade-related legislation from 25 jurisdictions; trends emerging from discussions within the CITES Working Group on Wildlife Cybercrime; a literature review. We present a brief outline of each challenge below.

1. **It is difficult to establish jurisdiction for wildlife crimes committed online, which can prevent successful prosecution**

Jurisdiction refers to “the power of a State, through its prosecutors, courts, and other institutions, to exercise legal authority over a territory, person or thing” (UN, 2018). Given that the internet is ‘borderless,’ identifying the jurisdiction in which the crime took place and, therefore, which country has the authority to investigate and prosecute is inherently challenging. The crime itself may involve multiple jurisdictions: the country of the seller, the country of the buyer, transit countries, countries hosting payment services and countries hosting the online platform the sale took place on. A country can only enforce against those within their jurisdiction, which complicates transnational efforts to investigate and penalise offenses crossing multiple borders; ensuring an international harmonised response will therefore be an essential step required to reduce IWT online.

2. **Existing legislation relating to wildlife trade is rarely applicable to the internet**

Currently, legislation relating to wildlife trade rarely incorporates online trade and is designed for physical markets, with only seven of 23 countries reviewed by the authors expressly criminalising IWT online. Additionally, most countries currently do not make it illegal to advertise wildlife products whose possession or sale is illegal, with legislation relating only to ‘real world’ crimes. This loophole can mean that without proof that a crime is committed, an enforcing officer does not have the authority to open an investigation, with the seller able to claim the advertisement was fake.

3. **Existing legislation relating to e-commerce is not designed to protect the item for sale**

Most current treaties relating to e-commerce focus on protecting the rights of buyers and sellers and not the item sold. Therefore, changes to regulation relating to wildlife crime would represent a significant shift towards protection not just of the consumers but the resource that is harmed by trade.

4. **It can be difficult to access user data online, preventing investigations and enforcement**

To establish jurisdiction of a crime and attach liability, it is important for law enforcement agencies to know who is involved. Therefore, criminal investigations may require access to personal data that may be stored and retained by internet service providers. Regulation of



**most
current
treaties**

relating to
e-commerce
focus on
protecting buyers
and sellers

the retention of this data and requirements for access to it varies between countries, which can make investigations, including those that may be transnational, challenging. Additionally, payment methods such as PayPal and bitcoin and the use of VPNs can enable those committing crimes online to hide their identities, which can compound this issue. Although some VPNs store data, regulations for access to this again vary by jurisdiction and may differ from those for internet service providers.

5. **Predicates within legislation require specialist knowledge by those investigating IWT online**

Out of seven countries reviewed that prohibited the online advertising of wildlife, two provided blanket bans without predicates, making the advertisement automatically illegal; for the other five countries, there were further qualifications, for example, prohibition of advertising without a required license. The authors point out that determining illegality can be complex and requires specialist knowledge by those investigating, for instance of CITES and national permit requirements for the taxa advertised, which can slow down or hamper an investigation.

The following page presents a framework for effective legislation which can overcome many of these challenges to ensure wildlife trade online can be adequately investigated and regulated.

Additional tools and ways forward for countries to improve regulation of IWT online identified in this review to implement changes are provided in **Annex 3** (page 47).

AN INTRODUCTION TO REGIONAL STRATEGIES AND COLLABORATIONS

The review identified two key organisations with a scope relevant to the prevention of IWT online in Central Africa: The African Union and COMIFAC.

The African Union was launched in 2002 with the vision of “An Integrated, Prosperous and Peaceful Africa” (African Union, 2021). The Constitutive Act of the Union states that any Member State that does not comply with decisions and policies of the Union may have sanctions enforced, and all COMIFAC states are members of the African Union. The Executive Council passed Decision EX.CL/Dec.832 (XXV) on ‘African Wild Flora and Fauna

Conservation and Illegal Trade in Wildlife’ during its 23rd Ordinary Session in 2014, which resulted in the development of the African Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Flora and Fauna (African Union, 2015).

In 2000, Central African countries established COMIFAC as a regional partnership to harmonise forest and environmental policies in Central Africa (COMIFAC, 2021). Member countries are Burundi, Cameroun, Chad, Central Africa Republic, Congo, DRC, Equatorial Guinea, Gabon, Rwanda and Sao Tomé & Principe.

RECOMMENDATIONS EMERGING FROM INTERNATIONAL AND REGIONAL POLICIES

Table 7 presents a summary of recommendations arising from CITES decisions and resolutions made between 2010, when CITES first placed wildlife crime linked to the internet on the agenda (TRAFFIC, 2019a), and 2019 when the most recent meeting of the Conference of the Parties occurred. Our team reviewed the COMIFAC Convergence plan 2015-2025 for improving the preservation and management of Central African forests and the African Union Strategy on Combatting Illegal Wildlife Trade for objectives relevant to each decision.

Table 7 shows that although the COMIFAC Convergence plan and the African Union Strategy on Combatting Illegal Wildlife Trade discuss some of the CITES recommendations in objectives relating to wildlife trade, neither explicitly state the need for actions relating specifically to wildlife trade online. Some objectives could be viewed as relevant to wildlife trade online by default; the COMIFAC Convergence Plan, for example, mentions the need to “revise national legislation relating to wildlife trade”. Despite this, direct mention of wildlife trade online in relevant objectives

could help to make the link clearer to relevant governmental departments when formulating national action plans. None of the more specific measures relating directly to wildlife trade online, such as developing a list of Appendix II species most frequently found for sale online, are addressed in either document.

In resolution 040 on implementing international efforts to combat the sale of illegal wildlife products online, the IUCN has recently urged countries to become Party to and ratify the Council of Europe Convention on Cybercrime (otherwise known as the Budapest Convention). The Budapest Convention is said to be the only international treaty capable of addressing regulations relating to illegal wildlife trade online (Wingard and Pascual, 2018). It has recently introduced procedures that would enable law enforcers to investigate internet-related crimes by giving authorities the power to search computer networks and collect and keep communication data (Wingard and Pascual, 2018). No COMIFAC country has currently signed or ratified to this Convention.



African Grey Parrot Psittacus erithacus

TABLE 7

An assessment of objectives from the COMIFAC Convergence Plan and the African Union Strategy on Combatting Illegal Wildlife Trade against CITES recommendations relating to online wildlife trade

| THEME | CITES RECOMMENDATIONS | COMIFAC CONVERGENCE PLAN | | AFRICAN UNION STRATEGY ON COMBATTING ILLEGAL WILDLIFE TRADE | |
|----------------------------|--|---|--|---|--|
| | | MENTIONS IN CONTEXT OF GENERAL ILLEGAL WILDLIFE TRADE | MENTIONS IN CONTEXT OF ILLEGAL WILDLIFE TRADE ONLINE | MENTIONS IN CONTEXT OF GENERAL ILLEGAL WILDLIFE TRADE | MENTIONS IN CONTEXT OF ILLEGAL WILDLIFE TRADE ONLINE |
| Investigation | Coordinate regular monitoring of wildlife trade online to share with law enforcement | ✓ | | ✓ | |
| | Develop a list of appendix II specimens offered for sale online | | | | |
| | Publish and share with CITES any information relating to trends in internet usage and trade in CITES listed species online | | | | |
| | Engage with owners of online marketplaces and social media platforms to seek input for best practice | | | | |
| | Establish a national unit dedicated to investigating wildlife crime online with a point of contact for information sharing and collaboration with other countries | ✓ | | | |
| Enforcement | Renew enforcement efforts for wildlife trade online with a focus on Appendix I listed species | ✓ | | | |
| | Encourage cooperation by postal, transport, logistical and financial service providers and relevant retail sectors in preventing wildlife trade online | | | ✓ | |
| | Conduct training and awareness raising on wildlife crime linked to the internet amongst enforcement officers where needed | ✓ | | ✓ | |
| | Utilise support from The International Criminal Police Organization (ICPO-INTERPOL), including their guidelines on combatting wildlife trade online | | | | |
| Legislation and regulation | Evaluate or develop domestic measures to ensure that they are sufficient to control legal wildlife trade, investigate illegal wildlife trade and punish perpetrators | ✓ | | ✓ | |
| | Publish clearly visible policies that prevent use of online platforms for illegal trade in wildlife and ensure compliance | ✓ | | ✓ | |
| | Encourage use of targeted alerts on online platforms to ensure users are aware of relevant laws and website policies | | | | |

AN ASSESSMENT OF THE STRENGTH OF LEGISLATION RELATING TO IWT ONLINE IN CAMEROON

Although improvements still need to be made in terms of training and awareness surrounding wildlife legislation in Cameroon (Nkoke, Nya and Ononino, 2016), current legislation within Cameroon enables effective implementation of CITES regulations. It makes the sale of all CITES Appendix I listed species illegal, regardless of associated documents. The sale of CITES Appendix II and III listed species is illegal without relevant CITES permits and proof by sellers that they have licenses as official capturers and exporters. There is a need for updates to current legislation relating to wildlife and cyber criminality in Cameroon to incorporate advertisement and sale of illegal wildlife trade online. This can ensure law enforcement officers have grounds to open investigations and apply existing legislation relating to CITES-listed species to online trade.

The framework for effective regulation presented in **Table 8** can inform changes needed to update current legislation and ensure wildlife

trade online can be appropriately regulated. Researchers ranked each recommendation as 'red,' 'amber,' or 'green.' Our team assigned green to recommendations that are currently enabled within national legislation, amber for recommendations which are partially enabled and red for those which currently had no applicable national legislation. A complete list of legislation reviewed is in **Annex 4**.

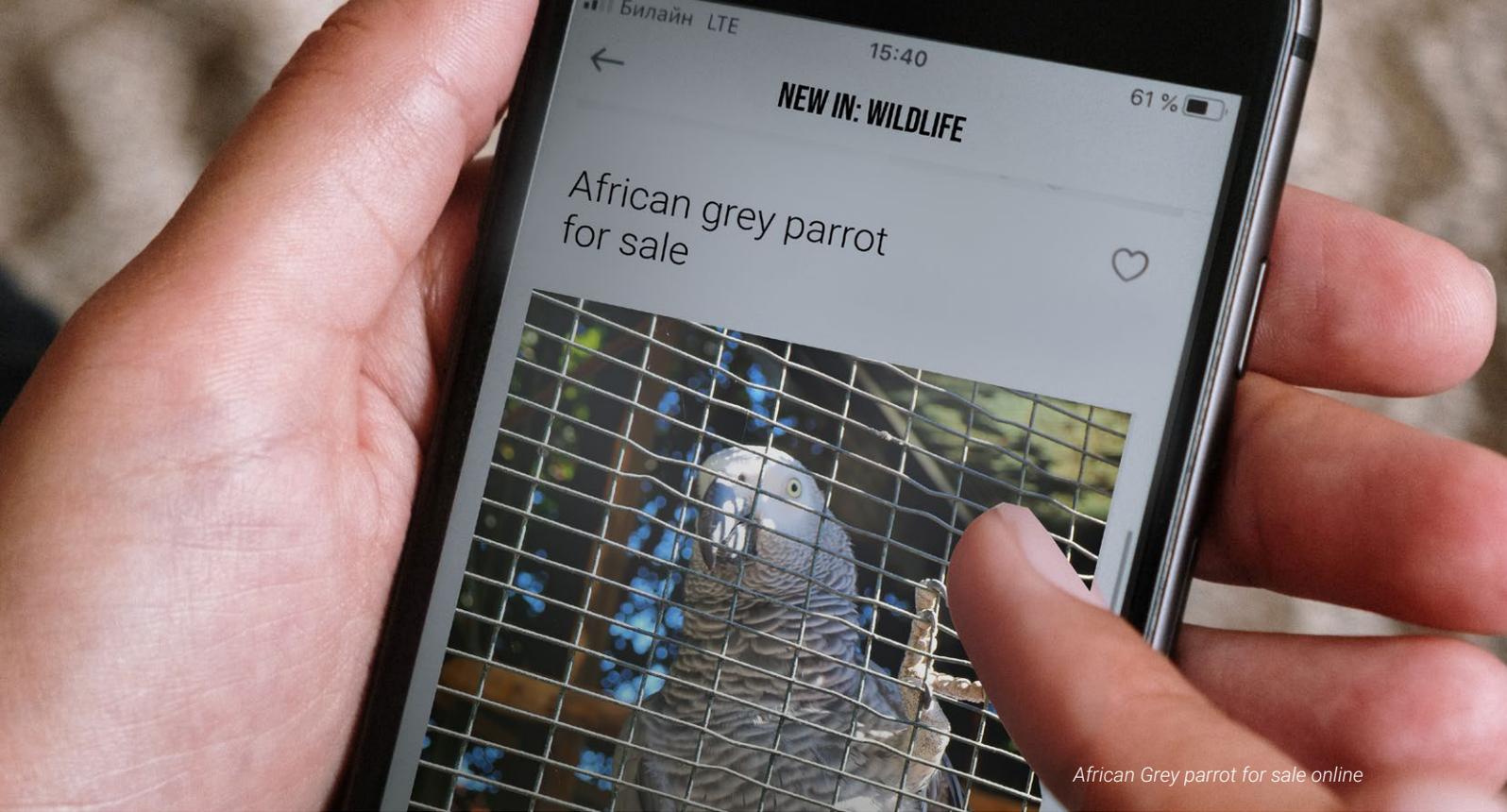
Key documents consulted to develop the framework in **Table 8** and guide potential solutions and recommendations for changes to current legislation were: Project Web, an INTERPOL investigation into ivory trade in Europe (INTERPOL and IFAW, 2013); a review of effective legislation by Wingard and Pascaul (2018); a UN *Guide on Drafting Legislation to Combat Wildlife Crime* (UN, 2018) and a recent report by TRAFFIC highlighting China's approach to combatting ivory trade online (2019).

TABLE 8

An assessment of laws in Cameroon against a framework for effective legislation

| THEME | RECOMMENDATION | RANKING |
|---|--|---------|
| Investigation | Ensure processes are in place that allows authorities access to digital information (e.g., through agreements and mechanisms with internet service providers or online platforms hosting advertisements) | ● |
| | Collaborate with online platforms and logistics services to ensure those selling and buying wildlife must share their true identity to enable investigation by authorities | ● |
| Enforcement | Create mechanisms that enable those investigating to quickly identify the legal status of wildlife advertised | ● |
| | Enable investigation and enforcement based on only digital evidence | ● |
| Legislation and regulation | Make protocols for online platforms hosting online advertisements clear and consistent | ● |
| | Include advertisement in addition to sale of wildlife trade online in laws relating to wildlife trade | ● |
| | Make as many aspects of the supply chain as possible illegal, e.g., sale, purchase, attempted purchase, and facilitation | ● |
| | Ensure pre-existing legislation relating to wildlife trade is updated to explicitly include sale by electronic means | ● |
| | Ensure the law is clear when it explains what constitutes 'illegal wildlife' to aid online investigations | ● |
| | Ensure that legislation relating to wildlife trade online (including online advertisements) contains provisions that enable jurisdiction outside of the country | ● |
| Where wildlife is advertised online, make it illegal to advertise without associated CITES documents and publicise obligations to sellers | ● | |

● Green ● Amber ● Red



RECOMMENDATIONS FOR CHANGES TO LEGISLATION IN CAMEROON

We present suggestions for changes to legislation and the rationale for each in **Figure 5**, focusing on recommendations from the framework in **Table 8** presently assessed as 'red.' A summary of laws within Cameroon that could benefit from updated legislation, as highlighted in **Figure 5**, is listed below.

1. Laws relating to criminality

- Criminal Procedure Code
- Law N° 2010/012 OF 21 DECEMBER 2010 relating to Cybersecurity and Cyber criminality in Cameroon

2. Laws relating to wildlife

- Decree N° 95-466-PM of 20 July 1995 to Lay down the Conditions for the Implementation of Wildlife Regulations
- Law N° 94/01 of January 20, 1994, Regulating Forests, Wildlife and Fishing
- Decree N° 2005/2869/PM of 29 July 2005 laying down detailed rules for the application of certain provisions of the convention on international trade in endangered species of wild flora and fauna

3. Laws relating to e-commerce and trade

- Law N° 2010/021 of December 21, 2010, Governing Electronic Commerce in Cameroon
- Law N° 2016/004 of 18 APR 2016 Governing External trade in Cameroon
- CEMAC Customs Code Act N° 5/001-UEAC-097-CM-06 03 August 2001
- Law N° 2015/018 of December 21, 2015, Governing Commercial Activity in Cameroon

The UN guide to drafting legislation for countries to combat wildlife crime states that it is not a "one size fits all" guide. Advice must be tailored according to national legal traditions and socioeconomic and cultural characteristics (UN, 2018). Similarly, the framework presented in **Table 8** and the recommendations outlined

in **Figure 5** together represent an effective but potentially idealistic mechanism for regulating wildlife trade online. This can be adapted depending on the national context and feasibility of implementing the suggested changes.

FIGURE 5

Potential changes to improve current legislation based on a framework for effective legislation of illegal wildlife trade online, with a focus on those assessed as 'red' in Table 8

| RECOMMENDATION | RATIONALE | BARRIERS WITHIN CURRENT LEGISLATION | POTENTIAL SOLUTIONS |
|--|---|---|--|
| <p>ENABLE INVESTIGATION AND ENFORCEMENT BASED ON ONLY DIGITAL EVIDENCE</p> | <p>It is difficult to open a case without evidence of a law broken. Usually, only digital evidence is available, but existing legislation often does not allow for this to be used. Sellers may also be able to hide their identity online, which prevents investigations</p> | <p>Decree No. 95-466-PM states that a report of a wildlife offence should include the complete identification of the offender and a description of the means they used. The Criminal procedure Code states a need for a date and time of an offence. Law N° 2010/012 does not state that an investigation can be opened based on digital evidence alone, only that it may support it</p> | <p>Decree No. 95-466-PM and the Criminal Procedure Code could state that an investigation can be opened based on digital evidence. Law N° 2010/021 and Law N° 2010/012 could include obligations for online platforms to have mechanisms in place that ensure sellers have to provide and verify contact details, including addresses when registering to aid with investigations</p> |
| <p>MAKE PROTOCOLS FOR PLATFORMS HOSTING ONLINE TRADE CLEAR AND CONSISTENT</p> | <p>Without consistency of approach traders can utilise platforms in which regulations are weak</p> | <p>Currently there is nothing explicitly mentioned in Law N° 2010/021 or Law N° 2010/012 regarding steps online platforms hosting trade should take to prevent illegal wildlife trade online</p> | <p>Law N° 2010/021 and Law N° 2010/012 could state that online platforms hosting trade take reasonable steps to avoid platforms being used to host illegal trade, for example, by ensuring sellers display any CITES permits required with advertisements for CITES-listed wildlife</p> |

| RECOMMENDATION | RATIONALE | BARRIERS WITHIN CURRENT LEGISLATION | POTENTIAL SOLUTIONS |
|--|---|--|---|
| <p>ENSURE ADVERTISEMENT OF CITES LISTED WILDLIFE FOR SALE ONLINE IS MADE ILLEGAL WITHOUT RELEVANT PERMITS</p> | <p>As the sale of wildlife online is often arranged offline or via private messaging functions, it can be challenging to prove a crime has taken place and open an investigation without making the advert itself illegal</p> | <p>Law N ° 94/01 currently does not mention the advertising of CITES-listed species in the context of illegality. Law N ° 2010/021 does not mention anything applicable to wildlife when outlining cases in which e-commerce may be prohibited or restricted</p> | <p>Law N ° 94/01 could state that advertising for CITES Appendix II and III listed wildlife online is illegal without associated permits displayed. Advertising for CITES Appendix I listed species online could be prohibited. Law N ° 2010/021 could additionally outline this in cases in which e-commerce may be prohibited or restricted</p> |
| <p>MAKE AS MANY ASPECTS OF THE SUPPLY CHAIN AS POSSIBLE ILLEGAL, E.G. INCLUDING FACILITATION</p> | <p>A lack of regulation surrounding the role of financial and logistics services can also leave gaps in enforcement</p> | <p>Law N ° 94/01 states that accomplices, including corporate bodies, are liable to the same penalties as the preparator, although what it means to be an accomplice is not clearly defined</p> | <p>Clarification is needed as to whether the term accomplice in Law N ° 94/01 includes online platforms facilitating trade, transport carriers and financial services with reasonable penalties for those facilitating illegal trade in CITES-listed species outlined.</p> |
| <p>ENSURE PRE-EXISTING LEGISLATION RELATING TO WILDLIFE TRADE INCLUDES EXPLICIT MENTION OF THE SALE BY ELECTRONIC MEANS</p> | <p>Without this, existing legislation surrounding the illegal wildlife trade does not automatically encompass that sold online</p> | <p>There is no mention of sale by electronic means in Decree No. 95-466-PM, Law N ° 94/01 or Decree No. 2005/2869/PM</p> | <p>Decree No. 95-466-PM, Law N ° 94/01 and Decree No. 2005/2869/PM could be updated with articles and sections relating to the sale of wildlife explicitly mentioning sales both online and in-person</p> |



CONCLUSION

THIS SURVEY IDENTIFIED A MINIMUM OF 43 CITES-LISTED SPECIES OFFERED FOR SALE, WITH 1267 SPECIMENS.

Although most species offered for sale were in Nigeria, its known role as a hub for IWT in products from Cameroon and other Central African countries indicates that species may be sourced from various neighbouring countries.

African Grey Parrot Psittacus erithacus

It is essential that volumes of wildlife for sale online are considered in future trade assessments and updates to IUCN Red Listings or CITES Appendix listings for species known to be advertised online. Most sellers listed their phone numbers publicly with online advertisements. Most online advertisements were for live species, indicating a large demand for the pet trade. Frequent use of English terms for items advertised in primarily French-speaking Cameroon is indicative of an international market for items advertised. A lack of mention of CITES permits was concerning, with sellers either unaware of the need for CITES permits for taxa being offered for sale or intentionally advertising without CITES permits. The use of common terms to list items offered for sale demonstrates that sellers did not feel obliged to hide advertisements, even in CITES Appendix I listed species. The majority of species identified for sale were CITES Appendix II listed, which have the potential to be legally traded with the correct CITES permits. Increasing awareness of permit requirements amongst online buyers and sellers would help to facilitate legal and regulated sales of these taxa online.

The case study of sellers within Cameroon demonstrated that most sellers offering CITES-listed wildlife for sale are in larger cities within the country and most specialised in one wildlife taxa or commodity. The existence of some international sellers and some online advertisements stating that worldwide delivery is available demonstrates that there may be trade occurring between countries to supply a regional or global demand for certain species, mainly live parrots. Of these sellers, many sold more than one species or stated that more were available on request, indicative of poaching to meet demand. A previous study found evidence of trade in African Grey Parrots between Africa and Asia via social media postings, with importers in Turkey serving as a middle ground for transportation between continents (Martin, Senni and D’Cruze, 2018). In this survey, researchers observed a seller located in Cyprus advertising African Grey Parrots for sale on an online platform hosted in Cameroon. These cases demonstrate challenges in determining the jurisdiction of crimes relating to IWT online; the online platform utilised by the seller

in Cyprus and hosted in Cameroon has a company headquarters located in London, with three different countries involved in facilitating IWT.

Researchers observed a lack of information available on modes of shipment and payment and the full names of sellers. Use of private messaging via site contact forms or phone numbers provided by sellers is the status quo for classified/listings platforms where most IWT online occurred. Buyers and sellers on these platforms are instructed to arrange to meet in person to exchange goods. If this is how items are exchanged, improved inspection and seizure of packages sent via postal channels will have a limited impact in disrupting IWT online. These factors illustrate the challenges for law enforcement in both proving that a crime has taken place and in holding those involved in committing the crime accountable. Without observing the crime itself, which is currently the sale of a protected species, it is challenging for law enforcement officers to regulate and prevent IWT occurring on online platforms. Making the actual advertising of specific protected wildlife species online illegal, introducing requirements for relevant CITES permits to be displayed online, incorporating online trade into existing wildlife legislation, and ensuring accurate information on sellers can be easily obtained from online platforms hosting advertisements online can aid investigations and enable regulation.

There is a need for updates to legislation relating to wildlife, e-commerce, and cyber criminality in Cameroon to ensure it can effectively regulate wildlife trade online, with the current legislation relating to wildlife trade not applicable to the online domain. Updates to the African Union Strategy on Combatting Illegal Wildlife Trade and the COMIFAC Convergence Plan 2015-2025 are also needed to ensure objectives relating to wildlife trade explicitly include wildlife trade online in their scope. This can help ensure a consistent and effective approach within Central Africa and Nigeria, especially as the online platforms currently responsible for most online advertisements operate across multiple countries.

REFERENCES

- African Union. (2015). *African Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa*. African Union, Addis Ababa, Ethiopia.
- African Union. (2021). *About the African Union*. African Union, Addis Ababa, Ethiopia. <https://au.int/en/overview>. Viewed 8 June 2021.
- Bergin, D., Atoussi, S. and Waters, S. (2018) Online trade of Barbary macaques *Macaca sylvanus* in Algeria and Morocco. *Biodiversity and Conservation*, 27(2): 531-534.
- CEMAC (2001) CEMAC Customs Code Act N° 5/001-UEAC-097-CM-06 03 AUGUST 2001. Legal Atlas. https://www.legalatlas.net/Wildlife_Trade/Legal_Framework/Cameroon/Customs_Code. Viewed 10 June 2021.
- IFAW (2010). CITES and electronic commerce. *CITES World Issue*. <https://cites.org/eng/news/world/19/7.php>. Viewed 1 June 2021.
- CITES. (2019a). *CITES: Convention on International Trade in Endangered Species of Wild Flora and Fauna*. UNEP-CITES, Geneva, Switzerland.
- CITES. (2019b). CoP18 Doc. 33.1. Eighteenth meeting of the Conference of the Parties Colombo (Sri Lanka). <https://cites.org/sites/default/files/eng/cop/18/doc/E-CoP18-033-01.pdf>. 23 May -3 June 2019.
- CITES. (2019c). 'Resolution 11.3 (Rev CoP18) on Compliance and enforcement.'. Geneva, Switzerland. Available at: <https://cites.org/sites/default/files/document/E-Res-11-03-R18.pdf>. Viewed 27 May 2021.
- CITES. (2020). 'Notification to the Parties No. 2020/031 Wildlife crime linked to the Internet.' Geneva, Switzerland. Available at: <https://cites.org/sites/default/files/notif/E-Notif-2020-031.pdf> Viewed 31 May 2021.
- CITES. (2021). How CITES works. Available at: <https://cites.org/eng/disc/how.php> Viewed 27 May 2021.
- COMIFAC. (2014). *Convergence plan for the conservation and sustainable management of ecosystems in Central African Forests 2015-2025*. COMIFAC, Yaoundé, Cameroon.
- COMIFAC. (2021). *Central African Forests Commission: A regional dimension for the conservation, sustainable and concerted management of forest ecosystems in Central Africa*. COMIFAC, Yaoundé, Cameroon. <https://www.comifac.org>. Viewed 7 June 2021.
- Esmail, N., Wintle, B. C., Sas-Rolfes, M., Athanas, A., Beale, C.M., Bending, Z., Dai, R., Fabinyi, M., Gluszek, S., Haenlein, C., Harrington, L.A., Hinsley, A., Kariuki, K., Lam, J., Markus, M., Paudel, K., Shukhova, S., Sutherland, W.J., Verissimo, D., Wang, Y., Waugh, J., Wetton, J.H., Workman, C., Wright, J., and Milner-Gulland, E.J. (2020). Emerging illegal wildlife trade issues: A global horizon scan. *Conservation Letters* 13 (4): e12715.
- Ezekiel, A. (2018). *Review of Marine Wildlife Protection Legislation in ASEAN*. TRAFFIC, Petaling Jaya, Selangor, Malaysia.
- GEI. (2020). *Wildlife Trafficking in Cameroon and Republic of the Congo. A Scoping Review and Recommendations for Cooperation with China*. Global Environmental Institute, Beijing, China.
- Harrington, L. A., Auliya, M., Eckman, H., Harrington, A. P., Macdonald, D. W. and D'Cruze, N. (2021) Live wild animal exports to supply the exotic pet trade: A case study from Togo using publicly available social media data. *Conservation Science and Practice*, 3 (7): e430.
- IFAW. (2008). *Killing with keystrokes: wildlife trade on the internet*. International Fund for Animal Welfare, London, UK.
- IFAW. (2017). *Out of Africa: Byting Down on Wildlife Cybercrime*. International Fund for Animal Welfare, London, UK.
- IFAW. (2018). *Disrupt: Wildlife Cybercrime. Uncovering the scale of online wildlife trade*. International Fund for Animal Welfare, London, UK.
- INTERPOL and IFAW. (2013). *Project web: An investigation into the ivory trade over the internet within the European Union*. INTERPOL, Lyon, France.
- ITC. (2020). *Business and policy insights: Mapping e-Marketplaces in Africa*. International Trade Centre, Switzerland, Geneva.
- IUCN. (2020). The IUCN Red List of Threatened Species. Version 2020-3. <https://www.iucnredlist.org>. Viewed 8 March 2021.
- Internet World Stats [IWS]. (2021). *World internet usage and population statistics*. Internet World Stats, Bogotá, Colombia. <https://www.internetworldstats.com/stats.htm>. Viewed 13 June 2021.
- Lavorgna, A. (2014). Wildlife trafficking in the Internet age. *Crime Science* 3(1): 1-12.
- Maisels, F., Strindberg, S., Blake, S., Wittemyer, G., Hart, J., Williamson, E.A., Aba'A, R., Abitsi, G., Ambahe, R.D., Amsini, F., Bakabana, P.C., Hicks, T.C., Bayogo, R.E., Bechem, M., Beyers, R.L., Bezangoye, A.N., Boundja, P., Bout, N., Akou, M.E., Bene, L.B., Fosso, B., Greengrass, E., Grossmann, F., Ikamba-Nkulu, C., Ilambu, O., Inogwabini, B., Iyenguet, F., Kiminou, F., Kokangoye, M., Kujirakwinja, D., Latour, S., Liengola, I., Mackaya, Q., Madidi, J., Madzoke, B., Makoumbou, C., Malanda, G., Malonga, R., Mbani, O., Mbendzo, V.A., Ambassa, E., Ekinde, A., Mihindou, Y., Morgan, B.J., Motsaba, P., Moukala, G., Mounguengui, A., Mowawa, B.S., Ndzai, C., Nixon, S., Nkumu, P., Nzolani, F., Pintea, L., Plumptre, A., Rainey, H., De Semboli, B.B., Serckx, A., Stokes, E., Turkalo, A., Vanleeuwe, H., Vosper, A., and Warren, Y. (2013). Devastating Decline of Forest Elephants in Central Africa. *PLoS ONE* 8 (3): e59469.
- Martin, R., Senni, C., and D' Cruze, N. (2018). Trade in wild-sourced African grey parrots: Insights via social media. *Global Ecology and Conservation* 15: e00429.
- Merem, E. C., Twumasi.Y., Wesley, J., Isokpehi, P., Fageir, S., Crisler, M., Romorno, C., Hines, A., Ochai, G. S., Leggett, S., and Nwagboso, E. (2018). Assessing the Menace of Illegal Wildlife Trade in the Sub-Saharan African Region. *Advances in Life Sciences* 8:1-25.
- Momballa-Mbun, C., Nguemwo, B. and Floros, C. (2021). Analysis of online IWT trade in Central Africa. Unpublished report.
- Nijman, V., Morcatty, T., Smith, J., Atoussi, S., Shepherd, C., Siriawat, P., Nekaris, K. A., and Bergin, D. (2019). Illegal wildlife trade – surveying open animal markets and online platforms to understand the poaching of wild cats. *Biodiversity* 20: 1-4.
- Nkoke, S. C., Nya, F. A., and Ononino, A. B. (2016). *Guide to Wildlife Law Enforcement, Cameroon: Competences, Attributions, Duties, and Responsibilities of the Different Law Enforcement Agencies*. TRAFFIC, Yaoundé, Cameroon and Cambridge, UK.
- Norconk, M. A., Atsalis, S., Tully, G., Santillan, A. M., Waters, S., Knott, C. D., Ross, S. R., Shanee, S., and Stiles, D. (2020). Reducing the primate pet trade: Actions for primatologists. *American Journal of Primatology* 82 (1): e23079.
- Republic of Cameroon (1994) Law N° 94/01 of January 20, 1994, Regulating Forests, Wildlife and Fishing. Legal Atlas. https://www.legalatlas.net/Wildlife_Trade/Legal_Framework/Cameroon/Forestry_Wildlife_and_Fisheries_Law. Viewed 15 June 2021.

- Republic of Cameroon (1995a) Decree N°. 95-466-PM of 20 July 1995 to Lay down the Conditions for the Implementation of Wildlife Regulations. Legal Atlas. https://www.legal-atlas.net/Wildlife_Trade/Legal_Framework/Cameroon/Wildlife_Regulations#toc_level_1. Viewed 8 June 2021.
- Republic of Cameroon (1995b) Decree N ° 2005/2869 / PM OF 29 JULY 2005 Fixing the Detailed Rules for the Implementation of Certain Provisions of the Convention on International Trade in Endangered Species of wild Fauna and Flora. Legal Atlas. https://www.legal-atlas.net/Wildlife_Trade/Legal_Framework/Cameroon/CITES_Implementing_Decree#toc_level_2. Viewed 11 June 2021.
- Republic of Cameroon (2005) Law N°2005 of 27 July 2005 on the Criminal Procedure Code. https://www.legal-atlas.net/Wildlife_Trade/Legal_Framework/Cameroon/Criminal_Procedure_Code. Legal Atlas. Viewed 10 June 2021.
- Republic of Cameroon (2006) Order N°. 0648/MINFOF OF 18 December 2006 to Set the List of Animals of Classes A, B and C. Legal Atlas. https://www.legal-atlas.net/Wildlife_Trade/Legal_Framework/Cameroon/Animal_Classes_Order. Viewed 10 June 2021.
- Republic of Cameroon (2010a) Law N ° 2010/021 of December 2, 2010, Governing Electronic Commerce in Cameroon. Legal Atlas. Viewed 8 June 2021.
- Republic of Cameroon (2010b) Law N° 2010/012 OF 21 December 2010 Relating to Cybersecurity and Cyber Criminality in Cameroon. Legal Atlas. https://www.legal-atlas.net/Wildlife_Trade/Legal_Framework/Cameroon/Cybercrime_Law#toc_level1_content_3. Viewed 11 June 2021.
- Republic of Cameroon (2016) Law N° 2016/004 of 18 APR 2016 Governing External Trade in Cameroon. Legal Atlas. https://www.legal-atlas.net/Wildlife_Trade/Legal_Framework/Cameroon/International_Trade_Law. Viewed 11 June 2021.
- Rosen, G. E., and Smith, K. F. (2010). Summarizing the Evidence on the International Trade in Illegal Wildlife. *EcoHealth* 7 (1): 24-32.
- Sajeva, M., Augugliaro, C., Smith, M. J., and Oddo, E. (2013). Regulating Internet Trade in CITES Species. *Conservation Biology* 27 (2): 429-430.
- Siriwat, P., and Nijman, V. (2020). Wildlife trade shifts from brick-and-mortar markets to virtual marketplaces: A case study of birds of prey trade in Thailand. *Journal of Asia-Pacific Biodiversity* 13 (3): 454-461.
- Statista. (2021a). *Internet Users Statistics for Africa*. Statista, Hamburg, Germany. <https://www.statista.com/statistics/1190628/social-media-penetration-in-africa-by-region/>. Viewed 8 June 2021.
- Statista. (2021b) *Social media penetration in Africa in 2021, by region*. Statista, Hamburg, Germany. <https://www.statista.com/statistics/1190628/social-media-penetration-in-africa-by-region/>. Viewed 7 June 2021.
- Stringham, O.C., Toomes, A., Kanishka, A.M., Mitchell, L., Heinrich, S., Ross, J.V., and Cassey, P. (2020). A guide to using the internet to monitor and quantify the wildlife trade *Conservation Biology* 35 (4): 1130-1139.
- Symes, W. S., Mcgrath, F.L., Rao, M., and Carrasco, L. R. (2018). The gravity of wildlife trade. *Biological Conservation* 218: 268-276.
- Tittensor, D. P., Harfoot, M., Mclardy, C., Britten, G.L., Kecse-Nagy, K., Landry, B., Outhwaite, W., Price, B., Sinovas, P., Blanc, J., Burgess, N.D., and Malsch, K. (2020). Evaluating the relationships between the legal and illegal international wildlife trades. *Conservation Letters* 13 (5): e12724.
- TRAFFIC. (2018). *Africa TWIX (Trade in Wildlife Information exchange): Promoting information sharing and co-operation to reduce illegal wildlife trade in Central Africa*. TRAFFIC, Yaoundé, Cameroon.
- TRAFFIC. (2019a). *Combating Wildlife Crime Linked to the Internet: Global Trends and China's Experiences*. TRAFFIC, Cambridge, UK
- TRAFFIC. (2019b). Online illegal wildlife trade: One-off Survey in Cameroon Yaoundé. Unpublished report.
- TRAFFIC. (2021). Fostering Cross Border Collaboration between Cameroon and Nigeria. *TRAFFIC News*. <https://www.traffic.org/news/fostering-cross-border-collaboration-between-cameroon-and-nigeria>. Viewed 6 August 2021.
- UN. (2004a). *United Nations Convention against Corruption*. United Nations, New York, USA.
- UN. (2004b). *United Nations Convention against Transnational Organized Crime*. United Nations, New York, USA.
- UN. (2018). *Guide on Drafting Legislation to Combat Wildlife Crime*. United Nations, Vienna, Austria.
- UNODC. (2020). *World Wildlife Crime Report 2020: Trafficking in Protected Species*. United Nations Office on Drugs and Crime, New York, USA.
- Wingard, J. and Pascual, M. (2018). *Catch me if you can: Legal challenges to illicit wildlife trafficking over the internet*. Global Initiative Against Transnational Organized Crime, Geneva, Switzerland.
- World Bank (2022) *Individuals using the internet (% of the population)*. World Bank Data, Washington D.C. <https://data.worldbank.org/indicator/IT.NET.USER.ZS>. Viewed 19 May 2022
- WWF (2021) Coalition to End Wildlife Trafficking Online <https://www.worldwildlife.org/pages/coalition-to-end-wildlife-trafficking-online> Viewed 8 April 2022

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ANNEXES

ANNEX 1

| CATEGORY | ONLINE PLATFORM | CAMEROON | NIGERIA | DRC | GABON | CHAD | |
|---------------------------------------|---|----------|---------|-----|-------|------|----|
| Classifieds/ listings ^a | Afriannounces (https://afriannounces.com/) | X* | X* | X* | X* | X* | |
| | Afribaba (https://www.afribaba.com/) | X** | X* | X** | | X* | |
| | Africaavenue (http://africavenue.com/) | X* | X* | X* | X* | | |
| | Banabaana (https://www.banabaana.com/) | X* | | X* | X* | X* | |
| | Bazar Afrique (https://ga.bazarafrique.com/annonces?order=tim) | | | | X* | | |
| | Camerbiz (https://www.camerbiz.com/en/) | X** | | | | | |
| | Cameroun Link (http://www.camerounlink.com/clads) | X* | | | | | |
| | Chuktu (http://www.chutku.com.ng/) | | | X | | | |
| | Coinafrique (https://www.coinafrique.com/) | X | | | X** | X** | |
| | Congo bon marche (http://congobonmarche.com/) | | | | X* | | |
| | Ebene-biz (https://www.ebene-biz.com/) | X* | | | | | |
| | Gabon announces (https://www.gabonannonces.com/) | | | | | X* | |
| | Gabon coin (https://www.gaboncoin.com) | | | | | X* | |
| | Jiji (https://jiji.ng/) | | | X** | | | |
| | Jumia deals (https://www.jumia.cm/en/catalog) | X** | | X** | X* | X** | X* |
| | Kusnap (https://kusnap.com/) | | | X | | | |
| | Locanto (https://www.locanto.com/geo/138451/Africa/) | X | | X** | X* | | |
| | Loozap (https://loozap.com/) | X** | | X** | X* | X** | X* |
| | Media congo (https://www.mediacongo.net/categories.html) | | | | X* | | |
| | Motekisi (https://motekisi.com) | | | | X* | | |
| | Sellatease (https://sellatease.com) | | | X | | | |
| | Tchad market (https://tchadmarket.com/) | | | | | | X* |
| | Toovendi (https://toovendi.com/cam-eroun/) | X* | | | | | |
| | Wappy (https://www.wappy.cd) | | | | X* | | |
| | Yalwa (https://www.yalwa.com.ng) | | | X* | | | |
| | Zobazo (http://cm.zobazo.com/) | | X | | | | |

| | | | | | | |
|----------------------------------|---|-----------|-----------|-----------|----------|----------|
| Online marketplaces ^b | Bargain master (https://www.bargainmasterng.com/) | | X | | | |
| | Durrell market (durrellmarket.com) | X | | | | |
| | Feelynx (https://www.feelynx.ng/) | | X | | | |
| | Iziway (https://iziway.cm/) | X | | | | |
| | Kikuu (https://m.kikuu.cm/search?code=&collectId=) | X | | | | |
| | Ledetailant (https://www.ledetailant.biz/) | X | | | | |
| | Sellam (www.sellam.cm) | X | | | | |
| | Welymarket (https://www.welymarket.com/) | X | | | | |
| E-commerce ^c | Africa shops (www.africa-shops.cm) | X | | | | |
| | Ajebo market (https://www.ajebomarket.com/) | | X | | | |
| | Baffs hq boutique (https://www.baffshqboutique.com/) | | X | | | |
| | Boogos (www.Boogos.com) | X | | | | |
| | Décor hub (https://www.decorhubng.com/) | | X | | | |
| | Deluxe (https://www.deluxe.com.ng/) | | X | | | |
| | Ekoolo (https://ekoolo.cm/) | X | | | | |
| | Limarket (https://www.limarket.net/) | X | | | | |
| | Obeezi (https://www.obeezi.com/) | | X | | | |
| | Ongeek (https://www.ongeek.cm/) | X | | | | |
| | Payporte (https://payporte.com/about-us) | | X | | | |
| | Simhom (http://simhom.com/simhom_cameroun/index.php?) | X | | | | |
| | Timeless (https://timeless.com.ng/) | | X | | | |
| | Yema (https://www.yema.cm/en/) | | X | | | |
| Forums ^d | Nairaland (https://www.nairaland.com/) | X* | | | | |
| TOTAL | | 27 | 20 | 12 | 9 | 6 |

- a the site lists sellers but does not facilitate transactions
- b the site hosts third party sellers and facilitates transaction
- c single or multi brand online store in which a brand's own product is sold
- d a site that facilitates discussions through posts by community members
- X sampled for the additional survey only
- X* sampled for the initial and additional survey, with illegal wildlife found offered for sale in the initial survey
- X** sampled for the initial and additional survey, with no illegal wildlife found offered for sale in the initial survey

ANNEX 2

| NO | KEY WORD (COUNT) | SPECIES/TAXA |
|----|---|-------------------------------------|
| 1 | Elephant/Eléphant (2) | Elephant |
| 2 | Ivory/Ivoire/tusk/défense/Marfil/colmillo (6) | Elephant, Hippopotamus |
| 3 | Hippopotamus/hippopotami/hippo/animal/hipopótamo (5) | Hippopotamus |
| 4 | Lion/León (2) | Lion |
| 5 | Leopard/Léopard/Leopardo (3) | Leopard |
| 6 | Panther/panthère/Pantera (3) | Panther |
| 7 | Skin/peau/Piel (3) | Protected species |
| 8 | Pangolin/Pangolin/nkákóló (3) | Pangolin |
| 9 | Monkey/Singe/Mona/Mono/makako/pet/mascotte/mascota/compagnie (9) | Monkey |
| 10 | Gorilla/Gorille/Gorila/mukumbusu (4) | Gorilla |
| 11 | Chimpanzee/Chimpanzé/Chimpancé/mokomboso/pet (4) | Chimpanzee |
| 12 | Bird(s)/Oiseau(x)/ndeke/pet/Pájaro/Ave(s) (8) | Protected species |
| 13 | Parrot/perroquet/nkoso/Lora/Loro (5) | African Grey Parrot |
| 14 | Crocodile/ngandó/pet/croco/Cocodrilo/Reptil(e(s)) (7) | Reptiles/Reptil(es) |
| 15 | tortoise/tortues/nkoba/pet/tortuga (4) | Tortoise |
| 16 | Turtle/tortue marines/pet/tortuga marina (3) | Turtle |
| 17 | Serpent/nioka/snake/Serpiente (4) | Snake |
| 18 | Shark/Shark fins/Requin(s)/Nageoire(s)/aileron(s)/tiburón/aletas/aletas de tiburón (11) | Shark fins |
| 19 | Bubinga (/Kévazingo (Gabon)/waka (D.R. Congo)/Bubinga (GQ) (3) | Bubinga |
| 20 | Wood/bois/nkoni/zámba/timber/Madera (6) | Bubinga and other protected species |
| 21 | Tooth/Teeth/dent/lino/ (4) | Protected species |
| 22 | Meat/viande/nyama/carne (4) | Pangolin, Gorilla, Chimpanzee |

ANNEX 3

Additional tools and collaborations identified in this review that may help countries to implement changes to improve regulation of illegal wildlife trade online

1. **The United Nations Convention against Corruption and United Nations Convention against Transnational Organized Crime** – together these outline mechanisms for dealing with transnational crimes (UN, 2004a; Wingard and Pascual, 2018) with the latter directly stating its use as a tool for international cooperation in combatting crimes including “illicit trafficking in endangered species of wild flora and fauna” (UN, 2004b).
2. The International Criminal Police Organization **ICPO-INTERPOL** has published guidelines on how to combat wildlife crime linked to the Internet, and CITES also advises utilising contacts within the **ICPO-INTERPOL office** in Singapore to seek advice and support on illegal tackling wildlife trade online (CITES, 2020).
3. The African Strategy on Combatting Illegal Exploitation and Illegal Trade in Wild Flora and Fauna recommends several organisations that can help to build upon their objectives including financial support from the **African Development Bank**, advice from the **United Nations Office on Drugs and Crime (UNODC) Global Programme for Combating Wildlife and Forest Crime** and use of regional partnerships such as **Regional Economic Communities (REC)** and **COMIFAC**. The strategy also mentions use of the International Consortium on Combating Wildlife Crime (ICWC) in particular for seeking advice on effective national legislation (African Union, 2015).
4. The **UN Guide on Drafting Legislation to Combat Wildlife Crime** (UN, 2018) includes relevant sections for IWT online with examples of potential wording to be used in legislation to cover aspects including jurisdiction of wildlife crimes online.
5. **The Africa Trade in Wildlife Information eXchange (AFRICA-TWIX)** is a tool developed by COMIFAC countries in collaboration with TRAFFIC to facilitate exchange of information and international cooperation between law enforcement and CITES management authorities (TRAFFIC, 2018) and could expand its reach explicitly into sharing information on wildlife trade online. It is currently implemented by Cameroon, Congo, Gabon, Democratic Republic of the Congo, Central African Republic, Chad, and Rwanda (TRAFFIC, 2018).
6. **The Coalition to End Wildlife Trafficking Online** partners companies with wildlife experts at WWF, TRAFFIC and IFAW on a global scale to enable effective approaches to reducing IWT online. Online platforms can publicly join the coalition to receive support in developing and publishing clear policies online, utilising training and machine learning to identify endangered species for sale and increasing users awareness (WWF,2021). A **Global Wildlife Cybercrime Action Plan** with clear actionable steps to reduce trade online was also produced as part of this coalition (CITES, 2019b).

ANNEX 4

A full list of laws reviewed for section 4.2.4

- Republic of Cameroon (1994) Law N ° 94/01 of January 20, 1994, Regulating Forests, Wildlife and Fishing.
- Republic of Cameroon (1995) Decree N°. 95-466-PM of 20 July 1995 to Lay down the Conditions for the Implementation of Wildlife Regulations.
- Republic of Cameroon (1995) Decree N ° 2005/2869 / PM OF 29 JULY 2005 Fixing the Detailed Rules for the Implementation of Certain Provisions of the Convention on International Trade in Endangered Species of wild Fauna and Flora.
- CEMAC (2001) CEMAC Customs Code Act N ° 5/001-UEAC-097-CM-06 03 AUGUST 2001.
- Republic of Cameroon (2005) Law N°2005 of 27 July 2005 on the Criminal Procedure Code.
- Republic of Cameroon (2006) Order N°. 0648/MINFOF OF 18 December 2006 to Set the List of Animals of Classes A, B and C.
- Republic of Cameroon (2010) Law N ° 2010/021 of December 2, 2010, Governing Electronic Commerce in Cameroon.
- Republic of Cameroon (2010) Law N° 2010/012 OF 21 December 2010 Relating to Cybersecurity and Cyber Criminality in Cameroon.
- Republic of Cameroon (2016) Law N° 2016/004 of 18 APR 2016 Governing External Trade in Cameroon.

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WORKING TO ENSURE THE TRADE IN
WILD PLANTS AND ANIMALS IS NOT
A THREAT TO THE CONSERVATION
OF NATURE

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