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SPECIES IN BUSHMEAT TRADE

IN CAMEROON AND THE REPUBLIC OF THE CONGO

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TRAFFIC REPORT

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CONTENTS

EXECUTIVE SUMMARY

BUSHMEAT CONSUMPTION IN CENTRAL AFRICA CONTRIBUTES TO FOOD SECURITY AND INCOME GENERATION OF MANY RURAL COMMUNITIES IN THE REGION[1]

However, the commercial bushmeat trade poses a threat from the overexploitation of wildlife species to meet the demand of urban markets and for products used in traditional medicine by Chinese and other East and Southeast Asian cultures. African pangolins Manidae have earned the reputation as the most traded mammals in the world and are now threatened with extinction after many years of exploitation to meet the ongoing demand for the species from East and Southeast Asia. There is also the risk of apparently non-threatened, and therefore less protected species, being harvested at unsustainable levels as substitutes for more threatened, protected species. This survey aimed to identify species being traded in the bushmeat markets of Cameroon and the Republic of the Congo (hereafter the Congo), that are being overexploited to meet emerging demands in East and Southeast Asia, before they become threatened with extinction. The report intends to provide wildlife conservation managers and bushmeat trade stakeholders with information and recommendations that will help them monitor, reduce and prevent unsustainable harvest of less protected wildlife species.

Fifty-nine randomly selected, consenting bushmeat vendors were interviewed using a structured questionnaire between May and July 2019 from four regions in Cameroon, and between August and September 2019 from two departments in the Congo. The regions (Centre, East, Littoral, South) in Cameroon and the departments (Brazzaville and Sangha) in Congo were purposely chosen to cover markets in localities identified as bushmeat harvesting areas, transit towns, as well as urban areas harbouring East and Southeast Asian nationals. During the surveys, additional information was also gathered from secondary sources and by using non-structured interviews with key contacts and stakeholder institutions in 13 towns and villages in the two countries. Hunting and trading of wildlife as bushmeat is an established activity in the Congo and Cameroon with a distinct supply chain from resource-rich forests to urban markets, run by bushmeat wholesalers, locally known as "routiers" in the Congo and mainly by hunters in Cameroon. In principle, bushmeat suppliers are legally authorised to operate through a permit and tax system that regulates the different operations along the supply chain. The suppliers do not openly trade species prohibited by law but are indirectly involved in illegal practices through the supply of prohibited hunting equipment, and trading in illegally sourced bushmeat. Questionnaire respondents said that they traded three to ten different species per day with antelopes Bovidae being the most common species sold in both countries. For the same bushmeat products of identical species, prices tended to be higher in Cameroon than in the Congo despite the Congo being a generally more expensive country. Higher numbers of protected species were found in markets in Cameroon than in the Congo, which could reflect better compliance with the law by bushmeat traders in the latter or lower species diversity.

20 (Cameroon) and 15 (Congo) prohibited and less protected taxa were observed in urban bushmeat markets

Questionnaire respondents indicated that they no longer traded in bushmeat of many species that have become better protected under enacted and enforced national legislation, e.g., African Buffalo *Syncerus caffer*, Western Gorilla *Gorilla gorilla gorilla*, pangolins, Chimpanzee *Pan troglodytes*, Tortoises Testudinidae, Water Chevrotain *Hyemoschus aquaticus*, De Brazza's Monkey *Cercopithecus neglectus* and African Elephant *Loxodonta africana*. However, poaching of all these species is still ongoing as evidenced by the records of seized products such as pangolin scales, African Elephant

ivory and African Python *Python sebae* skin. Seizures and court case records in both countries indicate that law enforcement efforts focus more on other wildlife products than on bushmeat.

Information provided by AMMCO from their systematic monitoring of the Edea market in Cameroon show that many more protected species were sold there which were not detected during a one-off survey. However, no new species apart from hares Leporidae in the Congo, were reported as being traded in either Cameroon or the Congo by the interviewees since they have been selling bushmeat for the past four to 42 years. This was intriguing since hare species are unknown to occur in the country. Unfortunately, the authors were unable to ascertain the identity of the so-called hare species because the samples in the market were smoked. Although not a new species in trade, the skulls and red tail feathers of the Grey Parrot *Psittacus erithacus* were identified in the Congo as emerging new products being illegally traded in the Tri-National Dja-Odzala-Minkébé transborder region (TRIDOM) Interzone Space in Congo (ETIC) landscape and allegedly transiting through Cameroon to final destinations in West Africa. Similarly, in Cameroon, pangolin scales and porcupine Hystricidae bezoars were found to be newly traded products. Although not illegal, sale of porcupine bezoars to East and Southeast Asian nationals (and Cameroon traditional medicine practitioners) takes place covertly. The vendors explained that as with pangolin scales, selling porcupine bezoars could be illegal because the buyers of this new product include people they perceive to be Chinese nationals.

Porcupines, which are considered non-threatened Class C bushmeat species in both countries, could therefore be currently targeted for an emerging trade in bezoars to meet the demand from traditional medicine in East and Southeast Asian cultures. This study could not confirm if bezoars are traded in Cameroon and the Congo as a by-product of the porcupine bushmeat trade or whether this is a newly emerging trade that will increase the demand for African porcupines. . However, given the experiences with pangolin scales, it seems pertinent to highlight and monitor the bezoar trade so that it does not degenerate into an unsustainable practice that would jeopardise the sustainable porcupine bushmeat trade. In both countries, there are stringent wildlife laws aligned to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) provisions whereby Class A species roughly correspond to CITES Appendix I listed species, Class B to CITES Appendix II and Class C to CITES Appendix III and non-CITES listed species. Class A species are prohibited from commercial trade, Class B species can only be commercially traded with hunting and collection permits while Class C species can be commercially traded with hunting and collection permits and can also be hunted for subsistence consumption by local populations without any permit. However, wildlife laws are inadequately enforced in the bushmeat markets with officers tolerating the sale of protected species as well as trading during closed seasons or beyond local areas. In active trophy hunting areas, the enforcement of wildlife laws against poaching and illegal trade is more effectively enforced.

In conclusion, market surveys in the Congo and Cameroon found that bushmeat trade is an ongoing activity that includes both legal and illegal practices. Whether products are openly or covertly traded depends more on any associated law enforcement efforts than on the protected status of the species or sustainability considerations. Attaining a legal and sustainable bushmeat trade is a challenging objective that requires long-term monitoring, e.g., by systems such as SYVBAC (Taylor et al. 2015), targeted surveys, and investigations to understand the hunting and consumption chain, sustained will to address any illegal and unsustainable practices, and commitment to adapt to the evolving legality and sustainability issues.

The recommendations formulated based on the results of this study, are aimed at governments and partner institutions to address legality and sustainability issues of the bushmeat trade in the Congo and Cameroon. They include practical actions on in-depth bushmeat trade monitoring, on information, education, and communication (IEC) and behaviour change research, messaging and campaigns, and on targeted law enforcement.

RÉSUMÉ

LA CONSOMMATION DE VIANDE DE BROUSSE DANS LES ZONES RURALES D'AFRIQUE CENTRALE CONTRIBUE DURABLEMENT À LA SÉCURITÉ ALIMENTAIRE ET À LA CRÉATION DE REVENUS POUR LES COMMUNAUTÉS RURALES DE LA RÉGION[1]

Toutefois, le commerce de la viande de brousse représente une menace pour les espèces sauvages surexploitées en vue de répondre à la demande des marchés urbains et celle des produits utilisés en médecine traditionnelle dans les cultures chinoises et d'autres cultures asiatiques d'Est et du Sud-Est. Par exemple, les pangolins africains ont gagné la réputation de mammifères les plus commercialisés au monde et qui sont actuellement menacés d'extinction après de nombreuses années d'exploitation pour répondre aux demandes asiatiques d'Est et du Sud-Est. Il existe également le risque que des espèces apparemment non menacées et donc moins protégées soient exploitées de manière non durable pour se substituer à d'autres espèces protégées plus menacées. Cette enquête visait à identifier de nouvelles espèces commercialisées sur les marchés de viandes de brousse au Cameroun et en République du Congo (ci-après désigné le Congo) et qui risquent d'être surexploitées pour répondre aux demandes émergentes en Asie de l'Est et du Sud-Est avant d'être menacées d'extinction. Le rapport vise à fournir aux gestionnaires de conservation de la faune sauvage et aux acteurs du commerce de la viande de brousse, des informations et des recommandations qui les aideront à surveiller, réduire et prévenir l'exploitation non durable d'espèces de faune sauvage moins protégées.

Cinquante-neuf vendeurs de viande de brousse consentants, sélectionnés de façon aléatoire, ont été interrogés au moyen d'un questionnaire structuré, entre mai et juillet 2019 dans quatre régions du Cameroun et entre août et septembre 2019 dans deux départements du Congo. Les régions (Centre, Est, Littoral, Sud) et les départements (Brazzaville et Sangha) ont été délibérément choisis pour couvrir les marchés des localités reconnues comme zones de récolte de viande de brousse, des villes de transit ainsi que des zones urbaines abritant des ressortissants d'Est et du Sud-Est. Au cours des enquêtes, des informations supplémentaires ont été recueillies à partir de sources secondaires et d'entretiens non structurés auprès de contacts clés et des institutions principales dans 13 villes et villages des deux pays.

La chasse et le commerce de la faune sauvage sous forme de viande de brousse sont des activités bien établies au Congo et au Cameroun, avec une chaîne d'approvisionnement distincte allant des forêts riches en ressources aux marchés urbains, gérée par des chasseurs au Cameroun et des grossistes de viande de brousse, appelés localement "routiers" au Congo. En principe, les fournisseurs de la viande de brousse sont légalement autorisés à opérer par le biais d'un système de permis et de taxes qui régit les différentes opérations le long de la chaîne d'approvisionnement. Les acteurs ne font pas ouvertement le commerce d'espèces interdites par la loi, mais sont indirectement impliqués dans des pratiques illégales par la fourniture de matériel de chasse interdit et le commerce de viande de brousse provenant de sources illégales. Les personnes interrogées ont dit qu'elles font le commerce de trois à dix espèces différentes par jour, les antilopes Bovidae étant les espèces les plus commercialisées dans les deux pays. Les prix ont tendance à être plus élevés au Cameroun qu'au Congo pour les mêmes produits de viande de brousse, quoique le Congo soit généralement plus cher. Des nombres plus élevés d'espèces protégées observées sur les marchés camerounais par rapport au Congo

20 (Cameroun) et 15 (Congo) taxons interdits et moins protégés ont été observés sur les marchés urbains de viande de brousse.

suggèrent que dans ce dernier, les opérateurs du secteur se conforment plus aux lois.

Les personnes interrogées ont indiqué qu'elles ne faisaient plus le commerce de la viande de brousse provenant de nombreuses espèces qui sont devenues plus protégées par les lois nationales, notamment le Buffle d'Afrique *Syncerus caffer*, le Gorille de l'Ouest *Gorilla gorilla gorilla*, les pangolins, le Chimpanzé *Pan troglodytes*, les tortues Testudinidae, le Chevrotain Aquatique *Hyemoschus aquaticus*, le Cercopithèque de Brazza *Cercopithecus neglectus* et l'Eléphant d'Afrique *Loxodonta africana*. Toutefois, le braconnage de certaines de ces espèces se poursuit, comme le démontrent les registres des produits saisis tels que les écailles de pangolin, l'ivoire d'Eléphant d'Afrique et la peau de Python d'Afrique *Python sebae.* Les états des saisies et affaires judiciaires dans les deux pays indiquent que les efforts de répression se concentrent davantage sur les autres produits de la faune que sur la viande de brousse.

La surveillance systématique du marché d'Edéa au Cameroun montre que beaucoup plus d'espèces protégées y sont vendues que celles détectées lors d'une enquête ponctuelle. Cependant, aucune nouvelle espèce n'a été signalée comme étant commercialisée au Congo ou au Cameroun dans les années récentes, à l'exception du « lièvre » Leporidae au Congo. Cette information est intrigante dans la mesure où aucune espèce de lièvre n'est présente au Congo. Malheureusement, nous n'avons pas pu établir l'identité de cette espèce dite de lièvre, car tous les échantillons sur le marché étaient fumés. Bien qu'il ne s'agisse pas d'une nouvelle espèce, le crâne et les plumes rouges de la queue du perroquet gris du Gabon *Psittacus erithacus* ont été identifiés au Congo comme de nouveaux produits émergeants du commerce illégal dans le paysage de l'Espace Transfrontalier Tri-Natonal Dja-Odzala-Minkebe (TRIDOM) Interzone Congo (ETIC) et transitant prétendument par le Cameroun vers leur destination finale dans les pays d'Afrique de l'Ouest. De même, pour le Cameroun, les écailles de pangolin et les bézoards de porc-épic Hystricidae ont été indiqués comme de nouveaux produits commercialisés. Bien qu'ils ne soient pas illégaux, les bézoards de porc-épic sont secrètement vendus aux ressortissants d'Asie de l'Est et du Sud-Est (et aux praticiens de la médecine traditionnelle camerounaise), car les communautés locales ont tendance à se méfier des "Chinois" lorsqu'elles s'engagent dans de nouvelles transactions commerciales.

Les porc-épics, qui sont considérés comme d'espèces de viande de brousse de classe C non menacée dans les deux pays, pourraient donc être actuellement la cible d'un commerce émergent pour ses bézoards en vue de répondre à la demande de la médecine traditionnelle dans les cultures asiatiques d'Est et du Sud-Est. Cette étude n'a pas pu confirmer si le bézoard est commercialisé au Cameroun et au Congo comme un sous-produit du commerce de viande de brousse de porc-épic ou s'il s'agit d'un nouveau commerce ciblé émergent, qui renforcera la demande en porc-épic d'Afrique. Cependant, compte tenu de l'expérience acquise avec les écailles de pangolin, il semble pertinent de mettre en évidence et de surveiller le commerce du bézoard de porc-épic, afin qu'il ne dégénère en une pratique non durable qui mettrait en péril le commerce durable de la viande de brousse de porc-épic.

Dans les deux pays, il existe des lois strictes sur les espèces sauvages alignées aux dispositions de la CITES : Les espèces de la classe A correspondent en gros aux espèces inscrites à l'annexe I de la CITES, celles de la classe B à l'annexe II de la CITES et celles de la classe C à l'annexe III de la CITES, ainsi que les espèces non inscrites à la CITES. Les espèces de la classe A sont interdites au commerce, les espèces de la classe B ne peuvent être commercialisées qu'avec des permis de chasse et de collecte tandis que les espèces de la classe C peuvent être commercialisées avec des permis de chasse et de collecte et peuvent également être chassées pour la consommation de subsistance par les populations locales sans aucun permis. Toutefois, en ce qui concerne les espèces présentes sur les marchés, la loi sur la faune n'est pas appliquée de façon adéquate sur les marchés de viande de brousse, avec des agents qui tolèrent la vente d'espèces protégées sous forme viande de brousse, et d'autres pratiques non autorisées telles que le commerce pendant les périodes de fermeture

ou au-delà des zones locales. Dans les zones de chasse de trophées actives, l'application des lois sur la faune sauvage contre le braconnage et le commerce illégal est plus efficace.

En conclusion, les marchés étudiés au Congo et au Cameroun indiquent que le commerce de la viande de brousse est une activité continue qui comprend des pratiques légales et illégales. Les produits qui sont commercialisés ouvertement ou discrètement dépendent davantage du niveau de sensibilisation et de l'application de la loi protégeant les produits que du statut protégé de l'espèce ou des considérations de durabilité de la part des acteurs. Le commerce légal et durable de la viande de brousse semble être un objectif ambitieux qui nécessite une surveillance à long terme, des enquêtes ciblées, et des investigations secrètes pour comprendre la chaîne allant de la chasse à la consommation, une volonté soutenue de s'attaquer à toute pratique illégale et non durable, et un engagement à s'adapter constamment à l'évolution des questions de légalité et de durabilité.

Sur la base des résultats de l'enquête, des recommandations sont proposées pour répondre aux questions de légalité et de durabilité du commerce de la viande de brousse au Congo et au Cameroun. Les recommandations aux gouvernements et aux institutions partenaires proposent des actions pratiques sur le suivi approfondi du commerce de la viande de brousse, ensuite sur la recherche, les messages et les campagnes d'information, d'éducation et de communication (IEC) et de changement de comportement, et enfin sur l'application ciblée de la loi faunique (ALF), afin de garantir un commerce de viande de brousse plus légal et plus durable dans les deux pays.

ABBREVIATIONS

ACFAP	*Agence Congolaise de la Faune et des Aires Protegées* (Congolese Wildlife and Protected Areas Agency
AMMCO	African Marine Mammal Conservation Organization
CABAG	Central African Bushmeat Action Group
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COMIFAC	*Commission des Forêts d'Afrique Centrale* (Central African Forest Commission)
DRC	Democratic Republic of the Congo
ETIC	*Espace TRIDOM Interzone Congo* (TRIDOM Interzone Space in Congo)
IEC	Information, Education and Communication
IPLC	Indigenous Peoples and Local Communities
IUCN	International Union for Conservation of Nature
LAGA	Last Great Ape Organization
LE	Law Enforcement
MEF	Ministère de l'Economie Forestière (Ministry of Forest Economy), Republic of the Congo
MINFOF	Ministère des Forêts et de la Faune (Ministry of Forestry and Wildlife), Cameroon
NGO	Non-Governmental Organisation
PALF	Projet d'Appui à l'Application de la Loi Faunique
PAPECALF	*Plan d'Action sous Régional des Pays de l'Espace COMIFAC pour le Renforcement de l'Application des Législations Nationales sur la Faune Sauvage* (COMIFAC's Wildlife Law Enforcement Action Plan).
SYVBAC	*Système de Suivi de la Filière Viande de Brousse en Afrique Central* (Central African Bushmeat Monitoring System)
TRIDOM	Tri-National Dja-Odzala-Minkébé (transborder region)
WCS	Wildlife Conservation Society
WWF	World Wide Fund for Nature
XAF	*franc de la Communauté Financière Africaine BEAC, (African Financial Community Franc BEAC)*

Market selling wildlife products near Yaounde, cameroon

INTRODUCTION

“WILD MEAT” OR “BUSHMEAT”, AS IT IS REFERRED TO IN AFRICA CONTRIBUTES SUBSTANTIALLY TO FOOD SECURITY AND INCOME GENERATION IN RURAL CENTRAL AFRICA.

Harvesting bushmeat for subsistence consumption is legal in Central African countries where it is considered a socio-culturally accepted and sustainable practice. Under this provision, members of local communities can harvest certain wildlife species for personal consumption using traditional hunting techniques which employ natural materials such as lianas and sticks. There is also commercial harvesting of bushmeat to meet the demand in rural areas and urban centres in African and international cities, most of which is illegal (Lindsey et al., 2015).

Commercial harvesting of bushmeat can also be legal under specific provisions that regulate hunting zones and seasons, the list of animals and quotas for different hunting categories, hunting equipment and conditions for killing, collecting, and trading of wildlife species. However, numerous studies consider commercial harvesting of bushmeat to be unsustainable for many species in the Congo Basin (Abernethy et al., 2013; Cowlishaw et al., 2005; Mbotiji, 2002; Milner-Gulland et al., 2003). Estimates of annual rural and urban bushmeat consumption in the Congo Basin vary from one million (Wilkie and Carpenter, 1999) to two million metric tonnes (Fa et al., 2003). However, a recent estimate gives a wider range, with an annual bushmeat offtake for Central Africa somewhere between 1.6 and 11.8 million tonnes (Coad et al., 2019). The threat is compounded by the demand from East and Southeast Asian countries, especially China, for wildlife products such as pangolin scales whose more recent trade bans are less enforced (World Bank 2017). Prior to 2000, overexploitation through the commercial trade of Asian pangolins as food status symbols and for traditional Chinese medicine (TCM) posed a major threat to these species (Challender and Hywood, 2012; Heinrich et al., 2016).

In 2000, zero export quotas were issued through CITES for the commercial trade of all Asian pangolins, effectively curbing their legal international trade. However, African pangolins, for which there was less commercial trade and therefore less concern, were not included in the zero export quota measures and could still be traded for primarily commercial purposes. As a result, demand for African pangolins as a viable alternative to Asian pangolins increased (Vallianos, 2016).

The East and Southeast Asian appetite for wildlife and the practice of substituting products from threatened and protected Asian species with less protected similar species from other regions, raises concerns that other African species are also being overexploited to meet demand from China and other East and Southeast Asian countries (Stephens and Southerland 2018). This could now include porcupines—historically exploited by traditional Chinese medicine for their gall stones, known as porcupine bezoars—and poisonous snakes, for their venom and meat (Duffin, 2013; Lee et al., 2014; Njeru, 2018; Redford et al., 1995). A 2018 study by TRAFFIC found that East and Southeast Asian imports of exotic African wildlife, including rare reptiles, mammals, birds and wild flora, increased between 2006 and 2015, with most of the species traded having received relatively little attention within CITES (Outhwaite and Brown, 2018). Another recent study has warned that many species of Asian porcupines could currently be overexploited to meet the demand for their bezoars in Malaysia and Indonesia (Heinrich, Toomes, and Gomez 2020).

This study aimed to assess wildlife species and products traded in selected bushmeat markets in Cameroon and the Republic of the Congo (hereafter the Congo) and identify any new species/trade routes linked to East and Southeast Asia.

METHODS

STUDY AREAS

FIGURE 1

Maps of the study area

The Congo and Cameroon are two countries in the Congo Basin where species of wild fauna are exploited as bushmeat both for subsistence and commercial purposes (Figure 1). The trade occurs in towns and villages around fauna rich landscapes and in urban areas. In both countries, survey localities were purposefully chosen to cover markets in urban areas where East and Southeast Asian nationals are likely resident, bushmeat harvesting areas, and transit towns. The sample came from lists of bushmeat markets drawn up from scoping studies and complemented from discussions with wildlife management agencies and conservation NGOs in both countries. The survey covered four regions in Cameroon: Centre (Nanga Eboko, Bafia, and Bayomen), Littoral (Edea, and Douala), South (Ebolowa, Sangmelima, and Djoum), and East (Abong-Mbang, Yokadouma, and Bertoua) and two departments in the Congo: Brazzaville (Draguage, Ouendzé-Mampassi, and Total Markets)[3] and Sangha (Oeusso and Sembé) along the main bushmeat trade routes (see Figures 1a and 1b for maps of the localities surveyed).[4] A challenge in bushmeat studies in Cameroon and Congo is the lack of consistent secondary data to appreciate trends in comparable aspects. AMMCO, through their localised bushmeat monitoring initiative in the Edea Market, provided an opportunity to look at more details during the study.

bushmeat trade in the Congo and Cameroon occurs in towns and villages around fauna rich landscapes

SURVEY AND DATA COLLECTION

The study combines primary data from bushmeat markets and secondary data from interviews with key actors to describe the sector and analyse species and products in trade, focussing on new species and products.

The data were collected during two missions in Cameroon between May and July 2019 and a mission in the Congo between August and September 2019. Data were collected using both a structured questionnaire for bushmeat traders from all markets covered in the study (Annex 1) and open-ended interviews with wildlife administrations and NGOs. The structured questionnaire was used to gather information on the species and products sold by the respondents and sought to categorise the bushmeat vendor, to gather information on the products currently traded, those no longer traded and new products being traded. In Cameroon, the authors interviewed 34 randomly selected vendors in 20 markets in 13 towns and villages. In the Congo, the authors, accompanied by a local assistant researcher, interviewed 25 vendors in five markets in Brazzaville and Ouesso. In the Congo, all sellers accepted being interviewed in the market; their responses directly entered into the questionnaire. In Cameroon, only two of the four vendors in Bertoua allowed an open interview. Seven were interviewed out of the market in Nanga-Eboko and Bafia. The rest 25 were interviewed in the market without using the questionnaire. In these cases, the researchers immediately left the market after each interview to fill in the questionnaire from memory. In Cameroon, all interviews were conducted in French while in the Congo, they were undertaken in Lingala with the assistance from the local researchers.[5]

The interviews were supplemented by direct observations of the species and products available in the markets and along intercity roads.

For complementary information on the evolution of bushmeat trade, legislation, wildlife law enforcement, and trafficking of protected species, secondary sources were consulted and others interviewed using non-structured flexible questions. In Cameroon, interviews were also conducted with representatives of MINFOF, LAGA, CABAG, and AMMCO. In the Congo, interviews were conducted and follow-up discussions were held with representatives of ACFAP, MEF, PALF, WWF, ETIC, WCS, and Save Elephants.
Supplementary information was also sourced from relevant literature, studies and databases. Supplemental data were also collected from AMMCO's regular surveys of the Edea bushmeat market carried out between 2017 and 2019.


CG150

RESULTS

PROPER IDENTIFICATION TO THE SPECIES LEVEL IS IMPORTANT IN ASSESSING THE LEGALITY OF WILDLIFE SPECIES FOUND IN THE MARKETS

The entrance to the Batouri Bushmeat Market, Cameroon.

Fresh monkeys and smoked bushmeat at the Bayomen market, Cameroon.

ANALYSIS AND RESULTS

BUSHMEAT TRADE CHAINS

five categories of operators exist within the bushmeat trade

Bushmeat trade is an established and regular economic activity in both countries. The trade is organised with different categories of operators playing distinct roles along the supply chains from the biodiversity rich forests, savannahs, and aquatic ecosystems to internal urban markets where there is a high demand for bushmeat (Figure 2). The different categories of operators/actors in the trade chain include:

- **Hunters**: those who hunt animals for the bushmeat trade. Some may practice legal hunting and others poaching or a combination of both. They sell mainly to wholesalers and restaurant owners.
- **Frontline wholesalers/"routiers":** those who collect bushmeat from hunters around the hunting areas and transport it to urban areas. They sell mainly to resellers and bulk wholesalers in urban areas.
- **Resellers**: those who retail the bushmeat to consumers.
- **Urban wholesalers:** those who buy from frontline wholesalers and hunters in urban areas for bulk supply to larger cities.
- **Consumers:** individuals, restaurants and hotels selling cooked meat.

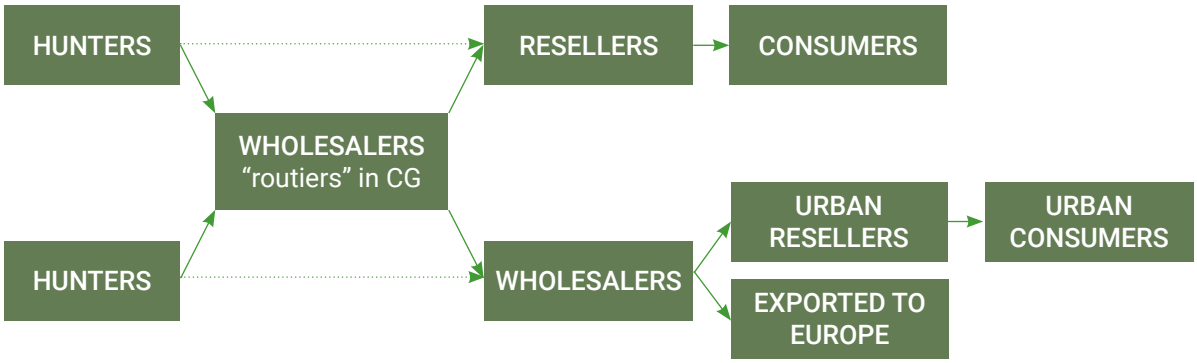
In the Congo, there is a well organised sector based around wholesalers in small urban areas near wildlife-rich landscapes from which the animals are sourced. These are the Mayombe Forest in Pointe-Noire, and the TRIDOM, Sangha Tri-National, and the TRIDOM Interzone Space in Congo (ETIC) landscapes

in Ouesso. The wholesalers, popularly known as "routiers", provide their networks of local hunters with hunting materials and other supplies such as cartridges, torches, batteries, alcohol and rice in exchange for their harvest. These supplies are generally given as credit to be reimbursed after sales of the catch. Although this arrangement gives each routier almost exclusive access to hunters within his/her network, the prices of the catch are always bargained during each transaction. The cost is deducted from the supplies and the balance paid in cash. During each trip, wholesaler collects meat from several hunters and transports it back to the urban markets to supply the resellers. The wholesalers also sell to other intermediary wholesalers who build up larger stocks to ship to Brazzaville by air, inland waterways, and road. The authorised routiers carry out their activities overtly, paying taxes to wildlife enforcement checkpoints who verify that protected species are not being transported. However, the checks also likely involve corrupt practices such as bribery and influence peddling since law enforcement agents turn a blind eye to the illegal transportation and supply of cartridges by routiers to their network of hunters.

A similar network of bushmeat wholesalers operates to a lesser extent in Cameroon. The wholesalers generally collect bushmeat from their hunter networks in small rural townships where there are no bushmeat markets, e.g. Bonepoupa on the Douala-Yabassi highway. They then transport the stock to major urban centres such as Douala and Yaoundé. The wholesalers generally avoid wildlife control posts along the highways because their activity is mostly illegal given that it is almost impossible to obtain valid legal collection permits. However, contrary to the Congo where hunters supply almost exclusively to routier wholesalers, in Cameroon, hunters transport most of the meat to wholesalers and resellers based in towns where the markets are located (Figure 2).

FIGURE 2

Typical Bushmeat Trade Chains in Cameroon and the Congo. Source: Synthesis by the authors from the findings



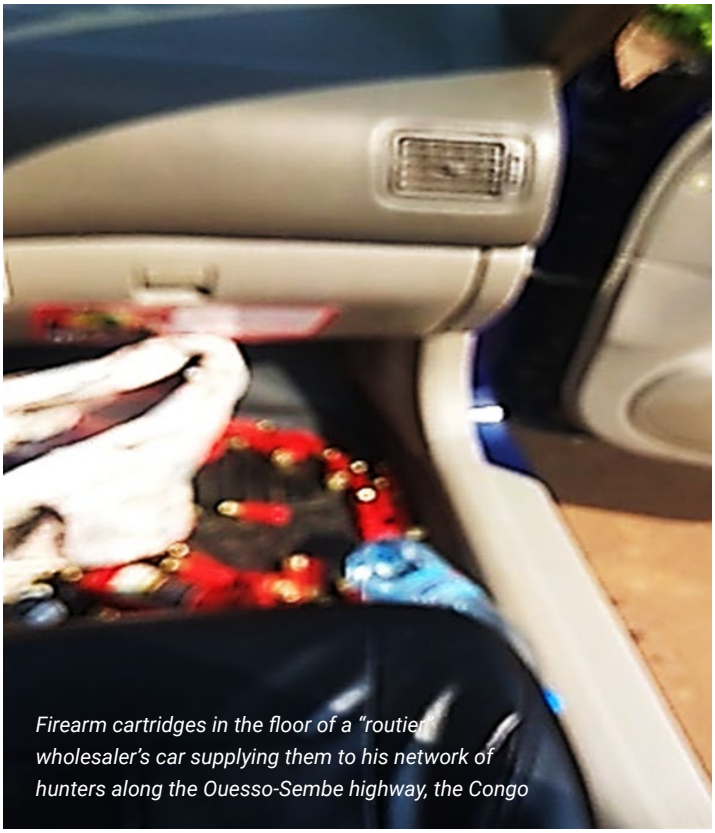
Most bushmeat is consumed in rural towns and urban centres within the two countries. When asked about the nationalities of buyers of the three most popularly sold species, there was a wide range of answers from respondents in the Congo. Some believed up to 76% of buyers were Congolese nationals, some that only 15% were Africans including Congolese, and 10% that they were a mix of Congolese nationals and individuals perceived to be of Chinese ethnicity. A similar breakdown was not possible for Cameroon since the respondents simply indicated that the main buyers are consumers from nearby urban populations without specifying their nationalities. Follow-up discussions with some vendors and WWF researchers revealed that some bushmeat is exported to Congolese and Cameroonian communities in Europe. The vendors said bushmeat is generally smuggled in small quantities by nationals of these two countries returning to their European countries of residence, although there are also networks of actors who traffic bushmeat to resellers in Europe. From the Congo, bushmeat is trafficked through international airports in

Brazzaville and Pointe-Noire, with the main entry points being Zurich, Brussels, and Paris. In Cameroon, bushmeat is trafficked through international airports in Yaoundé and Douala with the main entry countries being Switzerland and Belgium. Several studies in the last decade estimating the scale of illegal bushmeat import into Europe confirm that meat is smuggled from Central and West Africa through Airports in France, Switzerland, Belgium and Germany (Chaber et al. 2010, 2019; Falk et al. 2013; Gombeer et al. 2021; Jansen et al. 2016; Wood et al. 2014)

LEGALITY ISSUES WITH THE BUSHMEAT TRADE

In theory, the bushmeat trade within both countries is legal with similar laws regulating species hunted for commercial or subsistence purposes, quantities, areas open to hunting, hunting seasons, hunting equipment and techniques used. Details can be found in the key legislative texts some of which are presented in Table 1.

To operate legally within each country, hunters, wholesalers, distributors, and resellers must obtain permits and pay taxes to the government. In practice, however, legalised bushmeat operators in both countries only seem to comply with not openly dealing in species whose hunting or possession is prohibited or restricted in commercial trade. There are many illegal aspects to the trade chain, effectively rendering the internal bushmeat trade in both countries akin to open laundering of poached and illegally traded wildlife. Illegal practices include hunting with firearms, hunting by night, the supply of ammunition and tools for night hunting, hunting and trading outside of designated areas and seasons, buying bushmeat from poachers and unauthorised collectors, and trafficking of protected species. Illegally obtained wildlife is transported and traded as legal bushmeat once in the possession of authorised wholesalers in the Congo while in Cameroon, bushmeat becomes “legal” once it enters a designated bushmeat market.



Firearm cartridges in the floor of a “routier” wholesaler’s car supplying them to his network of hunters along the Ouesso-Sembe highway, the Congo

TABLE 1

References to comparative regulations in Cameroon and the Congo, compiled by the authors

REGULATION	CAMEROON	CONGO
Main legislation	Law No. 94-1 of 20 January 1994 to Lay Down Forestry, Wildlife and Fisheries Regulation	Law n° 37-2008 of 28/11/2008 on wildlife and protected areas.
Regulations	Order No 053/MINFOF of 1 April 2021 which replaces Order No. 0648/MINFOF of 18 December 2006 to set the list of animals of classes A, B and C. Order No 056/MINFOF of 15 April 2021 which replaces Order N° 0649/MINFOF of 18 December 2006 to lay down the distribution of animal species whose killing is authorised as well as the latitude of killing per type of sports hunting permit.	Order No 6075/MDDEFE/ CAB of 9 April 2011 which replaced Order No. 3863 of 18 May 1984 determining the fully and partially protected animals (Currently being revised).
Protection classes	• Class A – Totally protected (no commercial/ sports hunting permitted) • Class B – partially protected list of animals opened for sports hunting for hunting permit holders, in authorised hunting areas and during hunting periods. • Class C – least protected list of animals allowed for sports hunting/commercial purposes under same conditions as Class B, but also open for subsistence hunting and consumption in grassroots community without other restrictions.	Similar to Cameroon, although the list of Class A and Class B animals are much shorter.
Hunting seasons	Order No 1425/A/MINEF/DFAP/SAN: 1st December to 31st July, specifically: • Savannah: 1st December to 31st May (6 months) • Rainforest: 1st December to 31st July (8 months)	Law Order No 3772/MAEF DEFRN, BC17 of 12 Aug 1972: • Whole country: 1st May to 31st October (6 months)
Harvest Hunting permits, equipment and practices	Four types of hunting permits; • Big game sports hunting, • Medium game sports hunting, • Small game sports hunting; • Commercial harvest.	Four but different types: • Sports hunting for nationals and residnets • Sports hunting for foreigners • Village hunting/harvest • Commercial harvest

RESPONDENTS ARCHETYPE

THE COMPOSITION OF THE RESPONDENTS WAS SIMILAR FOR BOTH COUNTRIES. THEY WERE MADE UP MOSTLY OF RESELLERS (84% IN THE CONGO AND 82% IN CAMEROON).

over 80%
of respondents in each country were resellers

The rest were wholesalers and additionally for Cameroon, cooked meat vendors and one middleman. The resellers were mostly female (71% in Congo and 86% in Cameroon) while the wholesalers were mostly men (75% in Congo and 100% in Cameroon). In both countries, the ages of the respondents ranged from under 18 to 64 years, with the majority between 35 to 44 years (64% for Congo and 38% for Cameroon) followed by 45 to 54 years (16% for Congo and 24% for Cameroon).

The surveys revealed that bushmeat market organisation and processes are very similar in both countries. Bushmeat is openly sold in dedicated areas in food markets, near the sections for fish and domesticated meat. Questionnaire respondents said that on any given day they each sell three to ten different wildlife species and species groups depending on available supplies. The surveys found more species/species group in the markets in Cameroon—a total of 20 species compared to 15 for the Congo (Table 2). Nine species were common between Cameroon and the Congo bushmeat markets. However, a total of 11 species not sold in the Congo were available in Cameroon, and 6 species sold in the Congo but not in Cameroon. The species most commonly available in the markets were similar in both countries; antelopes, porcupines, monkeys, and Red River Hog *Potamochoerus porcus*. However, pangolins, snakes and lizards were only reported as sold in Cameroon while squirrels, Bay Duiker *Cephalophus dorsalis* and Yellow-backed Duiker *C. silvicultor* were only reported as sold in the Congo.

Different types of bushmeat at Bayomen roadside market, Cameroon From front to back: two smoked porcupine, two monkeys, female antelope Tragelaphus *sp., and African Civet* Civettictis civetta

TABLE 2

Taxa respondents said they traded

SPECIES (CLASS)	NUMBER OF RESPONDENTS SELLING THE SPECIES	
	CAMEROON (N=34)	CONGO (N=25)
Antelope Bovidae (N/A)	34	18
Porcupine Hystricidae (C)	33	18
Monkey Cercopithecidae (N/A)	30	17
Red River Hog *Potamochoerus porcus* (B)	22	12
Hare Leporidae (C)	19	1
Cane Rat *Thryonomys spp.* (C)	18	0
African Civet *Civettictis civetta* (B)	14	4
Pangolin Manidae (A)	7	0
Viper Viperidae (N/A)	6	0
Snakes Serpentes (N/A)	6	0
White-bellied Pangolin *Phataginus tricuspis* (A)	5	0
Boa Boidae (N/A)	5	0
Tortoise Testudinidae (N/A)	3	9
Crocodile Crocodylidae (N/A)	3	14
Serval *Leptailurus serval* (B)	2	0
Monitor lizard *Varanus spp.* (B)	2	0
Bongo *Tragelaphus eurycerus* (B)	1	0
Giant Pangolin *Smutsia gigantea* (A)	1	0
Gazelle *Gazella spp.* (B)	1	4
Bushbaby Galagidae (C)	1	0
Squirrel Sciuridae (C)	0	6
Great apes Hominidae (A)	0	2
Bay Duiker *Cephalophus dorsalis* (B)	0	2
Hedgehog *Atelerix spp.* (C)	0	2
Yellow-backed Duiker *Cephalophus silvicultor* (B)	0	1
Genet *Genetta spp.* (C)	0	1

Class A taxa in Yellow

Class B taxa in Green

Class C taxa in Black

Overall, 41% of questionnaire respondents said that antelopes were their most sold species group, followed by rodents (17%), and monkeys (16%). Fewer (6% each) said porcupines and bush pigs were their most traded species, while a smaller number of respondents said their most sold species groups were crocodiles, pangolins, wild cats, and snakes (Figure 3).

Separately, the respondents said the most traded bushmeat species in both countries were antelopes, monkeys, porcupines, wild cats, and Red River Hog, with antelopes top of the list in both countries (by frequency 48% in the Congo and 38% in Cameroon). However, there were some important differences between the countries. Crocodiles were the second most sold species in the Congo but were sold by only three respondents in Cameroon, and they were also seen for sale by non-respondents in some markets in Cameroon. Pangolins and snakes were indicated as being sold in Cameroon but not in the Congo. The antelopes, monkeys, crocodiles, snakes, monitor lizards, tortoises, and bush pigs species groups all include species in each of the categories of protection under national legislation in both countries. Proper identification to the species level is therefore important in assessing the legality of wildlife species found in the markets. This is an onerous task which sometimes may require DNA testing, especially in cases of meat sold as smoked and dried carcasses or in pieces.

The differences in bushmeat products between the two countries could reflect different demand preferences. In the Congo, bushmeat is sold mostly as whole fresh carcasses (58%) and in meat parts (25%), while in Cameroon it is mostly sold as meat parts (34%) and as whole dried carcasses (32%), while whole fresh carcasses only make up 27%. It is also sold in the Congo as whole smoked/dried carcasses (13%) and live animals (4%), while only 1% indicated that they sell bushmeat as live animals in Cameroon (Figures 4 and 5).

FIGURE 3

Species groups reported as most traded taxa in the markets in Cameroon and Congo

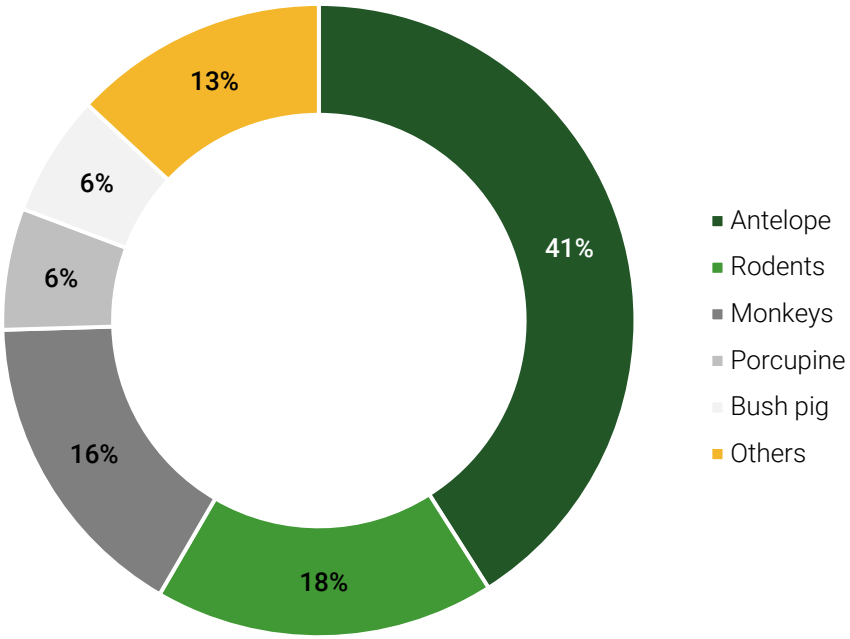
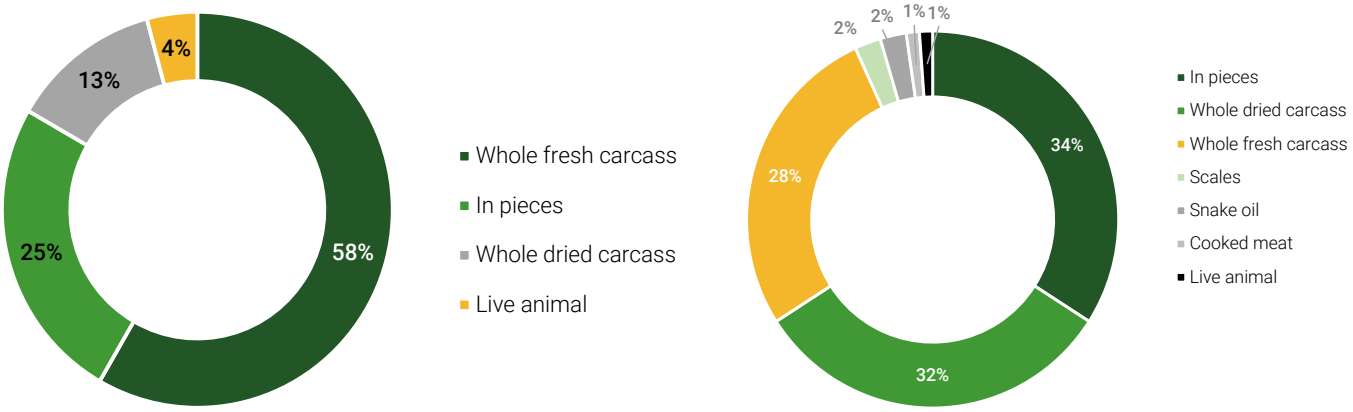


FIGURE 4 AND 5

Traded wild meat products in the Congo (left) and Cameroon (right)



In both countries the prices varied widely depending on the species, product, and the locality of the market, even for the same species and product (Table 3). However, overall, prices for similar products of the same species were much higher in Cameroon than in the Congo. For instance, the average price of a monkey in Cameroon was about XAF7,800 (USD13.49) for the whole fresh carcass and XAF5,000 (USD8.65) for the whole dried carcass compared to XAF3,500 (USD6.06) in the Congo for both fresh and dried whole carcasses, and about XAF6,950 (USD12.02) for the dried whole carcass of a porcupine in Cameroon compared to XAF1,250 (USD2.16) in the Congo . The biggest difference was for the whole fresh carcass of antelopes with an average price of XAF19,500 (USD33.74) in Cameroon compared to XAF2,550 (USD4.41) in the Congo. The highest priced product in Cameroon was a whole fresh antelope carcass which costs up to XAF25,000 (USD43.25) in the Edea Market, while in the Congo it was a live crocodile costing XAF12,000 (USD20.76) in the Dragage Market. This is surprising as the cost of living is considered significantly higher in Congo compared to Cameroon. Numbeo, the Mercer Index and the World Bank all rank Congolese cities (Brazzaville and Pointe-Noire) as more expensive than Cameroonian cities (Douala and Yaoundé)..

MOST SOLD TAXA Class B taxa in Yellow Class C taxa in Black	CAMEROON																CONGO					
	NANGA EBOKO	BAYOMEN		BAFIA	EDEA	DOUALA		EBOLOWA			SANGMELIMA	DJOUM	ABONG-MBANG	YOKADOUMA	BERTOUA	AVERAGE FOR CAMEROON	BRAZZAVILLE			OUESSO		AVERAGE FOR CONGO
	MAIN MARKET1	CENTRAL MARKET1	SATURDAY MARKET	HIGHWAY MARKET	CENTRAL MARKET2	NDOKOTI MARKET	NEW BELL GOAT MARKET	EBOLOWA SI MARKET	PETIT TOTAL MARKET	TRAVEL AGENCY SHEDS	MAIN MARKET2	MAIN MARKET3	CENTRAL MARKET3	MAIN MARKET4	DERNIER PORTEAU MARKET		TOTAL MARKET	OUENDZÉ MAMPASSI	DRAGUAGE	CENTRAL MARKET	GARE ROUTIÈRE	
Antelope (N/A)																						
Cooked part									1,000	1,000						1,000						
Dried part	10,750					12,000	10,500						5,500			9,900	500					500
Fresh part																	500					500
Fresh whole	20,000				25,000			17,000			16,000					19,500	2,550					2,550
Peters' Duiker *Cephalophus callipygus* (B)																						
Fresh part																				500		500
Blue Duiker (B)																						
Fresh part																				500		500
Gazelle (C)																						
Fresh whole																			2,500			2,500
Monkeys (N/A)																						
Dried whole	6,500											3,500				5,000		3,500				3,500
Fresh whole		8,000		8,500											7,000	7,833					3,500	3,500
Porcupine (C)																						
Cooked part			1,000								1,000					1,000						
Dried whole	6,750		7,000	6,000	9,000		7,500								6,500	6,938	2,000				500	1,250
Fresh part																						
Fresh whole					11,500	8,750										10,125						
Red River Hog (B)																						
Fresh part								4,250								4,250		3,600				3,600
Hare (C)																						
Dried part													6,000	4,500	5,250	5,250						
African Civet (B)																						
Fresh whole																	3,500					3,500
Crocodile (N/A)																						
Dried whole																		3,075	7,500			3,960
Live animal																			12,000			12,000

TABLE 3
Average price (in XAF) of most traded species as various products in the different markets

NEW SPECIES IN TRADE

AND SPECIES NO LONGER TRADED

Almost all the bushmeat traders interviewed (98%) said that they are not trading in any new species from those they have been trading regularly over the last four to 39 years in Cameroon and four to 42 years in the Congo.

However, five respondents in four markets in Cameroon said porcupine bezoars and pangolin scales were new products to them (Table 4). According to Heinrich et al. (2016), pangolin scales have been trafficked from Cameroon to Asia since 2008. As recently as 2015 pangolins were generally sold whole live or dead, and any scales removed in the bushmeat markets were discarded. In 2018, a TRAFFIC survey found that 76% of pangolins are now being sold descaled, with the sellers offering to descale whole pangolins before delivery to their buyers (Talla and Mbun, 2019). The scales are then sold to local intermediaries of scale exporting networks.

The main buyers of porcupine bezoars are East and Southeast Asian nationals and Cameroon traditional medicine practitioners. Both products are sold covertly despite porcupine bezoars being legal. The vendors explained that the prefer to err on the side of caution when trading in unfamiliar products in demand by buyers they believe to be of Chinese origin, especially following the change in the protection status of pangolins considered by traders to be a consequence of the perceived "Chinese" demand for their scales.

One respondent in the Total Market in Brazzaville said hares were the only new species in trade, probably because they are easily captured and not protected (Table 4). This information is intriguing because, according to the International Union for Conservation of Nature (IUCN) Red List of Threatened SpeciesTM and taxonomic studies, no species of hare or rabbit is found in the Congo (Johnston et al., 2019; Wilson and Reeder, 2005). Given that the "hare" meat seen during the survey was smoked, the authors are unable to ascertain whether it was indeed from a hare species, or some other species. However, The African Savanna Hare *Lepus victoriae*, assessed as being of Least Concern by the IUCN Red List of Threatened SpeciesTM is distributed in neighbouring Cameroon, Central African Republic and the Democratic Republic of the Congo (DRC) within a wider range from West Africa through Central and Eastern Africa to Southern Africa but circumventing the Congo (Johnston et al., 2019). No other species was identified as being newly traded in bushmeat markets. However, Dieudonné Ekoutouba, National Coordinator for ETIC said that seizures in the ETIC landscape indicate there may be an emerging new trade, outside of the bushmeat markets, in Grey Parrot *Psittacus erithacus* skulls and feathers in the Congo transiting Cameroon to West African countries (D. Ekoutouba, pers. comm. to C.M. Mbun and B.S. Nguemwo, 3rd September 2019). Investigations into this trade are ongoing, following which more information will become accessible to authorised researchers through the national Spatial Monitoring and Reporting Tool (SMART) database. This is an interesting development because prior to their CITES Appendix I and Class A listings, Grey Parrots were suspected to be mainly exported from the Congo through the DRC to the Middle East as wild birds or to South Africa where they were laundered as live captive bred birds.

76% of pangolins are now being sold descaled

TABLE 4

List of reported new products in trade at bushmeat markets of Cameroon and Congo

PRODUCT (CLASS)	COUNTRY	REGION/ DEPARTMENT	LOCALITY	MARKET	NO OF RESPONDENTS
Pangolin scales (A)	Cameroon	East	Abong-Mbang	Central Market	1
		Littoral	Douala	Ndokoti	2
		South	Sangmelima	Main Market	1
Porcupine bezoars (C)	Cameroon	East	Abong-Mbang	Central Market	1
			Bertoua	Dernier Porteau Market	1
		Littoral	Douala	Ndokoti	2
Hare whole dried carcass (N/A)	Congo	Brazzaville	Brazzaville	Total Market	1

TABLE 5

List of species reported as no longer traded (SNLT) in the bushmeat markets—frequency of responses indicating each species.[8]

TAXON	FREQ	SCIENTIFIC NAME	REASON SNLT	IUCN RED LIST STATUS	CITES APPENDIX	NATIONAL PROTECTION STATUS
Western Gorilla	26%	Gorilla *gorilla gorilla*	Protected	Critically Endangered	I (01/07/75)	Class A
African Buffalo	21%	*Syncerus caffer*	Scarcity/ Protected	Near threatened	Not listed	Class B
Pangolin	16%	Manidae	Scarcity/ Protected	Endangered/ Vulnerable	I (02/01/17)	Class A (Except for White-Bellied in Class B in Congo)
Chimpanzee	9%	*Pan troglodytes*	Protected	Endangered	I (04/02/77)	Class A
Giant Pangolin	7%	*Smutsea gigantea*	Scarcity/ Protected	Endangered	I (02/01/2017)	Class A
African Elephant	5%	*Loxodonta Africana*	Protected	Vulnerable	I (02/01/17)	Class A
Leopard, Panther	5%	*Panthera pardus*	Protected	Vulnerable	I (01/07/75)	Class A
Crocodiles	4%	*Osteolaemus spp; Crocodylus spp*	Protected	VU/ LC/ CR	I (11/06/99 and 23/06/10)	Class A (Except for Nile crocodile in Class B in Congo)
De Brazza's Monkey	2%	*Cercopithecus neglectus*	Scarcity	Least concern	II (04/02/77)	Class B
Great Apes	2%	Hominidae	Protected	Endangered/ Critically Endangered	I (01/07/75 and 04/02/77)	Class A
Water Chevrotain	2%	*Hyemoschus aquaticus*	Scarcity	Least concern	Not listed	Class A
Tortoise	2%	Testudinidae	Substitute available	Various	Various	Class A and Class B

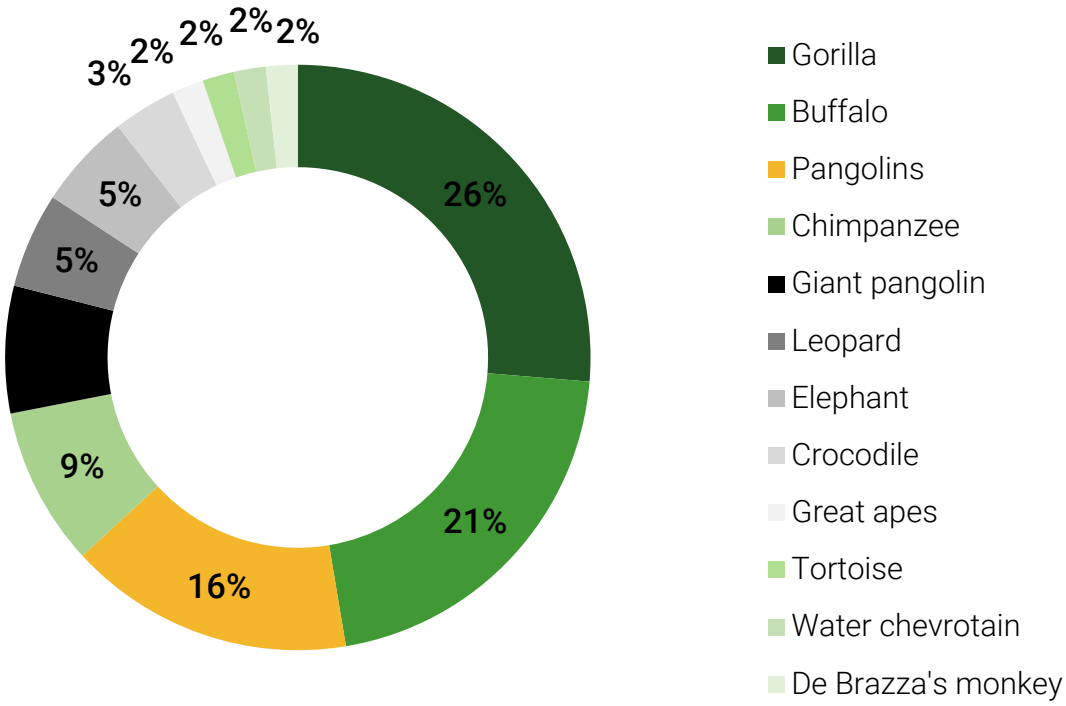
Respondents of both countries said they no longer trade in species that are either increasingly scarce and difficult to catch or have been afforded more protections by changes in regulations. These species included Western Gorilla *Gorilla gorilla*, African Buffalo *Syncerus caffer*, Giant Pangolin *Smutsia gigantea* and other pangolins, Chimpanzee *Pan troglodytes*, and African Elephant *Loxodonta africana*, in the Congo only, De Brazza's Monkey *Cercopithecus neglectus*, Water Chevrotain *Hyemoschus aquaticus*, and tortoises and in Cameroon only Leopard *Panthera pardus* and crocodiles (Table 5 and Figure 6).

All the species reported as no longer traded in bushmeat markets are protected by national wildlife legislation in both countries and have also been the focus of extensive public awareness campaigns and law enforcement actions to deter people from poaching and trafficking in them. The species are found on awareness charts and posters in public places and have been involved in court cases against poaching and trafficking. However, the species are still being sold either directly in the markets or in more private venues. Clearly legislation can be effective in reducing the open-market bushmeat trade provided there is adequate awareness of the relevant laws.

There is apparently more compliance with the law against trading in protected species in the Congo than in Cameroon. None of the species reported as being sold in the markets in the Congo were listed as Class A or Class B species protected by national legislation, except for live African Dwarf Crocodiles *Osteolaemus tetraspis* openly traded and two instances of White-bellied Pangolins discreetly traded in Ouesso. Conversely in Cameroon, some Class A and Class B species were still reported as being traded and/or observed during market surveys. These included three pangolin species, crocodiles, and Western Gorilla meat. Crocodile meat was openly on sale and White-bellied Pangolins were discreetly on sale in the markets in Cameroon, while some respondents said they could supply other Class A and Class B species that were not observed in the market surveys.

FIGURE 6

Frequency of responses indicating species no longer traded in the bushmeat markets.



TRAFFICKING
OF PROTECTED ANIMAL PARTS

Bushmeat suppliers, consumers and enforcement officers openly disregard certain aspects of the law, thereby greatly undermining the implementation of national legislation which protects wild animals from overexploitation and the conservation of wildlife resources. An analysis of court cases relating to protected wildlife carried out for this study found relatively few cases relating to bushmeat trade in either country. For instance, in Cameroon, between 2014 and 2019 bushmeat was specifically mentioned only twice concerning two pieces of African Elephant meat. Three other instances of whole dead carcasses, including two Chimpanzees and one unidentified duiker were also likely to be related to the commercial bushmeat trade (Table 6).

In the Congo there were no records specifically mentioning bushmeat (Table 7). In both countries, most cases related to African Elephant ivory, pangolin scales and the skin, skulls and other parts from great apes, reptiles, and other protected species (Tables 6, and 7).

As with bushmeat, more species and a wider variety of products were involved in Cameroon than the Congo (Tables 6, and 7). Some 26 species and 22 product types were listed for Cameroon compared to nine species and eight product types for the Congo.

The species most often recorded in poaching and trafficking cases in both countries were African Elephant (64% of cases in the Congo and 36% in Cameroon), and pangolins (18% in the Congo and 13% in Cameroon). Other species mentioned include African Python *Python sebae* (7%) and Leopard (4%) in the Congo (Table 7) and Chimpanzee, Western Gorilla, and other primates (34%), and big cats (7%) in Cameroon (Table 6). Apart from White-bellied Pangolin, these species are not generally traded in bushmeat markets, probably because poachers, traffickers and bushmeat traders are aware of their protected status. Most have been protected under Class A and Class B since 1984 in the Congo and 1998 in Cameroon. Governments and NGOs have carried out numerous public awareness and enforcement campaigns on these species which may have influenced bushmeat actors either to avoid these species or handle them covertly.

According to the National Coordinator for ETIC, additional information still pending entry into their database indicates an emerging new trade in Grey Parrot skulls and feathers in the Congo (D. Ekoutouba, pers. comm. to C.M. Mbun and B.S. Nguemwo, 3rd September 2019).[9] These products allegedly transit Cameroon to final destinations in West African countries. Further investigations are needed to understand what the skulls and feathers are used for. However, prior to the CITES 2017 ban on the international commercial trade in Grey Parrots, their feathers were used for decorating traditional caps as a status symbol for chiefs, notables and elders in some cultures in Cameroon (Bobo et al., 2015). The species is also hunted locally in Central and West Africa for its feathers, head and meat for use in traditional medicine and ceremonies (Mallon et al., 2015).

A more in-depth and systematic monitoring of bushmeat harvest, trade and consumption could be useful for understanding the harvesting of Class C species and in informing anti-poaching and anti-trafficking actions relating to all Classes of species openly or covertly traded as bushmeat.[10] AMMCO's database permitted us to get a more comprehensive picture of the trade in the Edea market.

TABLE 5

List of species reported as no longer traded (SNLT) in the bushmeat markets—frequency of responses indicating each species.[8]

SPECIES	THREATENED/PROTECTION STATUS			SEIZURES			QUANTITY		
	IUCN	CITES APP.	NATIONAL PROTECTION	FREQ.	PERCENT	PRODUCT TYPE	BAG	KG	NO.
African Elephant *Loxodonta africana*	VU	*I*	A	85	36%	Sculptured Ivory Objects			540
						Ivory tusk		18	534
						Tooth			125
						Tail			89
						Bone			41
						Jawbone			30
						Parts			11
						Skull			10
						Nails			8
						Skin			3
						Hoof			3
						Meat piece			2
						Ivory piece		2	
						Ivory chips			
Chimpanzee *Pan troglodytes*	EN	*I*	A	41	17%	Skull			146
						Hand			34
						Bone			9
						Live animal			9
						Fresh head			7
						Parts			4
						Whole carcass			2
Western Gorilla *Gorilla gorilla*	CR	I	A	23	10%	Skull			67
						Parts			16
						Jawbone			3
						Skin			2
Pangolins Manidae	EN	*I*	A	19	8%	Scales		6,457	
Leopard, Panther *Panthera pardus*	VU	*I*	A	15	6%	Skin			19
						Tooth			9
Giant pangolin *Smutsia gigantea*	EN	*I*	A	11	5%	Scales	9	399	4
Mandrill *Mandrillus sphinx*	VU	*I*	A	9	4%	Skull			23
						Live animal			4
Sea Turtle Testudinae		*I*	A	6	3%	Shell			50
Monkey Primates				3	1%	Skull			6
Red River Hog *Potamochoerus porcus*	LC	NL	B	3	1%	Skull			6
						Tooth			3
Hippopotamus *Hippopotamus amphibius*	VU	*II*	A	3	1%	Tooth			10
African Python *Python sebae*	NA	II	A	2	1%	Skin			2
Slender-snouted Crocodile *Crocodylus cataphractus*	CR	I	A	2	1%	Skin			2
						Live animal			1
African Buffalo *Syncerus caffer*	NT	NL	B	2	1%	Horn			2

SPECIES	THREATENED/PROTECTION STATUS			SEIZURES			QUANTITY		
	IUCN	CITES APP.	NATIONAL PROTECTION	FREQ.	PERCENT	PRODUCT TYPE	BAG	KG	NO.
Mona Monkey *Cercopithecus mona*	NT	II	B	2	1%	Skull			5
						Live animal			1
Lion *Panthera leo*	CR	II	A	1	5%		Skin		1
Duikers Cephalophus spp.			B	1		Whole carcass			1
Drill *Mandrillus leucophaeus*	EN	I	A	1		Skull			1
Boa Boidae				1		Skin			2
Sea snail Liparidae			C	1		Shell			2
Bioto Putty Nosed Monkey *Cercopithecus nictitans*	EN	NL	C	1		Live animal			1
Warthog *Phacochoerus africanus*	LC	NL	B	1		Skull			2
Bay duiker *Cephalophus dorsalis*	NT	II	B	1		Skull			1
Zebra *Equus grevyi*	EN	I	C	1		Skin			3
Colobus Monkey *Colobus spp.*	VU	II	A	1		Live animal			1
Grey Parrot *Psittacus erithacus*	EN	I	A	1		Live animal			218
Unidentified				1		Skin			1
TOTAL				238	100.0%				

TABLE 7

Specimens of protected species trafficked between 2013 and 2019 at the ETIC (Congo)

TAXON	THREATENED/PROTECTION STATUS			TROPHY TYPE	FREQ
	IUCN	CITES APP.	NATIONAL PROTECTION		
African Elephant *Loxodonta africana*	VU	I	A	Ivory tusks	58%
				Elephant tail	2%
				Worked ivory	2%
				Trunk	2%
Giant Pangolin *Smutsia gigantea*	EN	I	A	Scales	11%
African Python *Python sebae*	NE	II	A	Skin	7%
White-bellied Pangolin *Phataginus tricuspis*	EN	I	A	Scales	5%
Aardvark *Orycteropus afer*	LC	Not listed	A	Legs	2%
				Skull	2%
Crowned Eagle *Stephanoaetus coronatus*	NT	II	C	Legs	2%
				Skull	2%
Leopard, Panther *Panthera pardus*	VU	I	A	Skin	4%
African Grey Parrot *Psittacus erithacus*	EN	I	B	Skull	2%
Slender-snouted Crocodile *Crocodylus cataphractus*	CR	I	A	Skin	2%

SYSTEMATIC MONITORING

OF A BUSHMEAT MARKET: THE CASE OF EDEA BY AMMCO

The data provided by AMMCO cover regular monitoring of Edea Market twice a week for 61 weeks between November 2017 and May 2019. The data reveal that more species are traded than are observed during a one-off survey (Table 8). More non-protected (Class C) species were seen for sale (66% of visits) compared to protected species (Classes A and B, 13% and 21% of visits respectively). However, in terms of species diversity, more protected species (15) were offered compared to 11 non-protected taxa during this period. The most commonly encountered protected species in the market were the Nile Monitor *Varanus niloticus* (8% of visits), White-bellied Pangolin (4%), African Softshell Turtle *Trionyx triunguis* (4%), Nile Crocodile *Crocodylus niloticus* (4%), Yellow-Backed Duiker (3%), African Python (2%), and Red River Hog *Potamochoerus porcus* (2%) (Table 8). No seasonal trends over time in the bushmeat trade were apparent.

TABLE 8

List of species observed in Edea Market between November 2017 and May 2019.

NATIONAL LEGISLATION STATUS/SPECIES	IUCN	CITES	COUNT	% WITHIN EACH CLASS	%
CLASS A			64	100%	13%
White-bellied Pangolin *Phataginus tricuspis*	EN	I	21	33%	4%
African Softshell Turtle *Trionyx triunguis*	VU	II	19	30%	4%
Nile Crocodile *Crocodylus niloticus*	LC	I	18	28%	4%
Water Chevrotain *Hyemoschus aquaticus*	LC	III (GH, DK)	3	5%	1%
Giant Pangolin *Smutsia gigantea*	EN	I	2	3%	0%
Black-bellied Pangolin *Phataginus tetradactyla*	VU	I	1	2%	0%
CLASS B			100	100%	21%
Nile Monitor *Varanus niloticus*	NA	II	39	39%	8%
Yellow-backed Duiker *Cephalophus silvicultor*	NT	II	17	17%	3%
African Python *Python sebae*	NA	II	10	10%	2%
Red River Hog *Potamochoerus porcus*	LC	NE	10	10%	2%
African Civet *Civettictis civetta*	LC	III (BW, DE)	8	8%	2%
Spotted Hyena *Crocuta Crocuta*	LC	NE	7	7%	1%
Forest Turtle *Pelusios gabonensis*	NA	III (BW, DE)	6	6%	1%
Serval *Leptailurus serval*	CR	II	2	2%	0%
Spotted-necked Otter *Lutra maculicollis*	NT	II	1	1%	0%
CLASS C			322	100%	66%
Porcupine *Hystrix indica*	LC	NE	79	25%	16%
Tantalus Monkey *Chlorocebus tantalus*	LC	II	76	24%	16%
Four-toed Hedgehog *Atelerix albiventris*	LC	NE	47	15%	10%
Blue Duiker *Cephalophus monticola*	LC	II	40	12%	8%
Giant Rat *Cricetomys emini*	LC	NE	38	12%	8%
Bates' Pygmy Antelope *Neotragus batesi*	LC	NE	28	9%	6%
Gaboon Viper *Bitis gabonica*	NA	NE	8	2%	2%
Francolin *Francolinus spp*	NA	NE	2	1%	0%
Banded Mongoose *Mungos mungo*	LC	NE	2	1%	0%
Western Palm Squirrel *Epixerus ebii*	LC	III (GH, DK)	1	0%	0%
Greater Cane Rat *Thryonomys swinderianus*	LC	NE	1	0%	0%
TOTAL			**486**		**100%**

DISCUSSION AND CONCLUSIONS

EFFORTS BY BOTH COUNTRIES TO MEET THEIR INTERNATIONAL COMMITMENTS TO CONSERVE AND PROTECT WILDLIFE SPECIES APPEAR NOT TO BE FOCUSED ON THE BUSHMEAT TRADE

BUSHMEAT MARKETS EVOLVING

TO CHANGING LOCAL AND INTERNATIONAL ENVIRONMENTS

Efforts by both countries to meet their international commitments to conserve and protect wildlife species appear not to be focused on the bushmeat trade. This is unsurprising given international measures through CITES and other agreements have focused on the negative impacts of unsustainable trade in ivory, scales, bones, pets, and fins on species such as elephants, rhinoceros, pangolins, Grey Parrot, great apes, big cats, and sharks, rather than on bushmeat. However, measures to counter the unsustainable harvest of wildlife species to meet international demand for these high value products generally affect the legislative and management frameworks for the entire species, with direct consequences on their exploitation for other products such as their meat. This could also explain why measures seem to be more stringently enforced against the trafficking of high-value products than against the meat of the targeted species—like the case of pangolin scales and meat in Cameroon.

The emergence of new high value products in trade for species that are otherwise considered sustainable in the bushmeat trade should therefore be of concern as it could lead to unsustainable harvests, which in turn would trigger more restrictive measures. Such measures could be considered as unjustified from a bushmeat perspective, resulting in the low and delayed buy-in by both those engaged in the bushmeat trade and by wildlife law enforcement agencies. They would argue that the bushmeat trade in both rural and urban areas without the additional trade in other high value products would not be a threat to wildlife.

Therefore, the emerging trade in porcupine bezoars in Cameroon needs to be monitored to prevent the trade from rendering porcupine populations vulnerable to harvesting for bushmeat. Porcupines are currently considered a species at low risk of overexploitation for their meat and are considered Class C wildlife in both countries. However, according to two recent studies, all eight extant species of Asian porcupines are already threatened by overexploitation for the commercial trade of their meat and bezoars, with a spillover risk to all three extant species of African porcupines (Gomez 2021; Heinrich et al. 2020). That is why the authors of both studies have suggested that to prevent further trade-related depletion of the studied Asian species through improved regulation, enforcement and monitoring, all 11 Hystiricidae species should be listed on CITES Appendix II and included as more protected species under targeted national wildlife laws. Conversely, the Grey Parrot is already highly protected under national legislation in both countries, international trade is banned under CITES and it is not a bushmeat species. Threatened by the unsustainable international pet trade, the species was uplisted to CITES Appendix I (and subsequently to Class A in both countries). Although trade in live birds is gaining international attention, the emerging trade in feathers and skulls through Cameroon to West Africa for cultural and traditional medicinal uses seems to be less well regulated. It is imperative to gain a better understanding of this trade in order to provide law enforcement agencies with actionable information.

STRINGENT WILDLIFE LAWS ALIGNED TO THE PROVISIONS OF KEY MULTILATERAL ENVIRONMENTAL AGREEMENTS

The harvest of bushmeat is regulated through international conventions, regional agreements, and national policies and legislation aimed at protecting wildlife species from overexploitation (Egute et al., 2015) while at the same time allowing access for sustainable supplies of wildmeat from legal sources for Indigenous Peoples and Local Communities (IPLCs). The main relevant international and regional instruments are CITES, the Convention on Biological Diversity (CBD), the African Union-governed African Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa, the Treaty on the Conservation and Sustainable Management of Forest Ecosystems in Central Africa and the Central African Forests Commission (COMIFAC), and COMIFAC's Wildlife Trade Law Enforcement Action Plan (PAPECALF).

The main national legislation on wildlife management and protection in Cameroon is Law No. 94/01 of 20th January 1994 which lays down Forestry, Wildlife and Fishery Regulations and its implementing instruments, and Law No. 37–2008 on Wildlife and Protected Areas and the 2011 order listing protected wildlife in the Congo.

The national legislation of both countries groups all wildlife species under three classes affording them different levels of protection. Class A species are totally protected and may only be killed in the case of official battues organised by the wildlife administering authorities.[11] Class B species may be hunted, captured, or killed subject to the granting of a hunting permit. This can only take place in authorised hunting areas and during periods officially opened for hunting. There are three categories of hunting permits which regulate the type of hunting gear to be used and the maximum number of animals that can be killed by each permit holder. Class B animals killed by permit holders during open hunting seasons and from designated hunting areas can be commercially traded by bushmeat collection permit holders. No Class B species can be legally harvested without a hunting permit, even for subsistence consumption. Finally, Class C species, comprising all species not listed in Class A or Class B, can be harvested by local community members throughout the year outside authorised hunting areas and with no official permit, but only using weapons made from plant materials (e.g. sticks, lianas), in small quantities and exclusively for subsistence consumption by the harvester. Hunting permit holders are also allowed to harvest a defined but generally larger number of Class C animals under the same conditions as Class B species. Like Class B species, the law prohibits any class C species from being commercially traded by vendors who do not hold an official collection permit.
These national laws are aligned to CITES. In essence, Class A species correspond to CITES Appendix I, Class B to CITES Appendix II and Class C to both CITES Appendix III and non-CITES listed species. The national laws also include provisions that implicitly include species in the corresponding Class following any changes in their CITES listing. However, in practice, there is a lag in formally interpreting these clauses or adapting the legislation to the changes in CITES. Traders and Law Enforcement agents do not seem to consider the implications of changes in CITES listings until they are explicitly included in national legislation and promoted through targeted awareness and enforcement campaigns.
The governments have also taken other regulatory measures and instruments aligned to the CBD to ensure sustainable use and preservation of the biological diversities of their wild species and ecosystems. The main legislation which regulates the implementation of the country's biodiversity conservation goals and sustainable use in line with her commitments to the CBD, is Law No. 96/12 of 5 August 1996 Relating to Environmental Management in Cameroon and Law No. 003/91 of 23 April 1991 on the Protection of the Environment. One key instrument is the development of National Biodiversity Strategies and Action Plans to guide their commitment to the CBD, which is to ensure the conservation of biodiversity, the sustainable use of its components and the equitable sharing of benefits arising from the utilization of genetic

resources. Another key measure in both countries is the legal obligation of promoters to carry out environmental impact assessments of all projects likely to have significant adverse effects on biological diversity. However, compliance with the countries' obligation under the CBD's, specifically to guarantee sustainable use rights to IPLCs and improving their engagement in wildlife management are continuous challenges in both countries despite their recognised potential in combating IWT (Cooney et. al., 2016) and relevant recommendations of the CBD Liaison Group on Bushmeat (CBD, 2012) and its voluntary guidance for a sustainable wild meat sector (CBD, 2018). These instruments are enforced by the Ministry of Environment and Sustainable Development (MINEPDED) in Cameroon and the Ministry of Tourism and Environment (MTE) in the Congo.

INADEQUATE ENFORCEMENT OF NON-INCLUSIVE WILDLIFE LAWS

Many observers are concerned that laws exclude IPLCs from the management of wildlife resources and marginalise them from the benefits of those resources in favour of the government and other wildlife users, such as foreign sports hunters and ecotourists. Not providing (co-)management rights to IPLCs can have the effect of increasing illegal and unsustainable hunting and collection activities detrimental to nature conservation (Abernethy et al., 2010; Cooney et. al., 2016, Fargot et al., 2017; Lindsey et al., 2015, 2013; Nelleman et al., 2014; Nguiffo and Talla, 2010).

Some wildlife officers interviewed during this study and a previous survey in 2018 (Talla and Mbun, 2019) considered the laws too stringent for impoverished rural communities, making it almost impossible for them legally to hunt and consume wildlife species for three main reasons.

Firstly, many IPLCs that rely on wildlife species for their protein supply live near landscapes that are not authorised hunting areas. Secondly, the cost of obtaining hunting and collection permits for Class B and Class C species are prohibitive to IPLCs In Cameroon for example, they include a long list of documents plus a quarterly fee of XAF150,000 (USD259.50) for the hunting permits and XAF100,000 (USD173.00) for the collection permits (The Prime Minister 1995 secs. 37–52). This measure seems to favour unsustainable commercial hunting for urban markets over sustainable local subsistence hunting.

law enforcement tolerate bushmeat suppliers, undermining national legislation

Thirdly, it excludes rural IPLCs from legally hunting and consuming culturally and economically valuable wildlife species such as African Elephant and Bongo *Tragelaphus eurycerus*, which are hunted by foreign sports hunters with the assistance of the government.[12] IPLCs feel unfairly marginalised, thereby instilling resentment to conservation processes and defiance to the law manifested through increased poaching (Nguiffo and Talla, 2010, Cooney et. al., 2016).

The above might explain why in practice laws are not fully enforced, as evidenced by the presence of bushmeat markets open all year round and trading in all three species classes. Law enforcement agencies largely tolerate bushmeat suppliers and consumers who openly disregard many aspects of the law, thereby greatly undermining the effectiveness of the national bushmeat legislation to manage and protect wildlife resources. This includes the use of prohibited hunting practices and equipment, hunting outside hunting seasons or zones, hunting and trading without the required hunting or collection permits, and abusing subsistence hunting and consumption rights for commercial harvesting. Under such circumstances, it is important regularly to assess the sustainability of the extensive trade in less-protected species such as antelopes and rodents.

Wildlife officials from different agencies and localities acknowledge that they use a combination of sensitisation and enforcement actions to curb the trade in bushmeat. Sales

of Class A and iconic Class B species are strictly prohibited, while those of Class C and less iconic Class B species such as Bush Pig, Warthog, African Civet, Serval, and otters are tolerated within the designated market areas. In the markets, Class C animals are openly sold, while Class B and lesser-known Class A animals are also openly sold but quickly concealed whenever the traders are informed or suspect that law enforcement agents are visiting their market. The iconic Class A animals are never openly sold in the market. However, some sellers said that they can still supply some of these species upon request, especially African Elephant, great apes, and Giant Pangolin.

EFFECTIVE ENFORCEMENT OF WILDLIFE LAWS AROUND ACTIVE HUNTING TOUR AREAS

The presence of active legal sport hunting areas is considered as having a positive impact on the conservation of wild animals. The tour operators have incentives and collaborate with law enforcement agencies to implement anti-poaching surveillance within their designated landscapes. Beyond the confines of designated trophy hunting zones, it is apparent that law enforcement authorities are willing to implement laws selectively for iconic Class A and B species but not for all species. The combination of widespread awareness campaigns and sting operations takes targeted wildlife species off the open bushmeat markets, even if it does not stop their trafficking. The absence of species in physical bushmeat markets but whose other products are found in seizure records suggests that their meat is either abandoned by the hunters or traded through other more covert routes. Such practices pose a serious threat to the management and conservation of wildlife resources.

Confiscated traps and ammunition from a sport hunting zone in Yokadouma, Cameroon

CONCLUSION

In conclusion, surveys of markets in the Congo and Cameroon found the bushmeat trade is an ongoing activity that includes both legal and illegal practices. The products that are openly or covertly traded depend more on awareness and enforcement of the law protecting the products than on the protected status of the species or sustainability considerations by the vendors.

Ensuring a legal and sustainable bushmeat trade is a challenging objective which requires multifaceted actions. These include long-term monitoring, targeted surveys, and investigations to understand the hunting and consumption trade chain, sustained political will, and effective administrative actions to address any illegal and unsustainable practices. It also requires clear commitment to adapt to evolving legality and sustainability issues together with continuous awareness and sting operations so all stakeholders are made aware of newly protected species and their current status.

It is also difficult to assess the sustainability of the extensive trade in non-protected species such as most duikers and rodents. Finally, the emerging trade in new wildlife products is sometimes effectively driven by demand in East and Southeast Asia for products in Africa that are ready substitutes for local products that have been depleted or become more protected This appears to be the case for porcupine bezoars from Cameroon to meet demand in traditional Chinese medicine. Although there was no indication that the newly emerging trade in Grey Parrot parts was driven by demand from Asia, it clearly warrants further investigation.

RECOMMENDATIONS

Based on the findings of the report, governments and partner institutions supporting Congo's and Cameroon's bushmeat trade monitoring, awareness, behaviour change, and law enforcement are encouraged to take the following practical actions to ensure a more legal and sustainable bushmeat trade in both countries.

BUSHMEAT TRADE MONITORING

REGULAR AND IN-DEPTH SURVEYS

NGOs specialising in bushmeat monitoring such as TRAFFIC should conduct more regular and in-depth surveys of representative markets gathering information:

- on bushmeat vendors and wildlife traffickers for improved knowledge on species, volumes, trade routes, as well as any international links;
- with, and on, hunting communities engaged in the trade around protected areas and resource-rich landscapes to understand better the use of wild meat from protected species poached for other high-value products (such as African Elephant, Giant Pangolin, big cats) absent in the open bushmeat markets;
- on new species and products in trade with intra-regional or international links, such as Grey Parrot skulls and tail feathers, Leporids, and porcupine bezoars;
- on the drivers for the continuous open trade in some highly threatened and protected species e.g., crocodiles, Bay Duiker, Yellow-backed Duiker, Red River Hog.

ASSESS VIABILITY OF LOCAL ANIMAL POPULATIONS

Conservation NGOs such as WWF and WCS working directly in landscape management should assess the viability of local animal populations of less protected species that are highly traded such as various antelope, rodents, bat and reptile species.

IMPLEMENTATION OF BUSHMEAT INFORMATION SYSTEMS

Conservation NGOs monitoring wildlife trade such as TRAFFIC should continue to support the implementation of bushmeat information systems such as the Central African Bushmeat Monitoring System (SYVBAC), ensuring that it includes the ability to detect and pre-empt the overexploitation of otherwise less threatened species for new high value products with potentially unsustainable demand.

INFORMATION, EDUCATION AND COMMUNICATION AND BEHAVIOUR CHANGE

SIMPLIFY WILDLIFE LAWS

TRAFFIC should explore possibilities for simplifying wildlife laws in both countries to guide legal and sustainable consumption, such as developing and sharing a positive list of bushmeat species that can be more easily assimilated by both law enforcement officers and users (hunters, transporters, sellers, and consumers).

SUMMARISE CITES AND CBD UPDATES FOR LEGISLATIVE REVIEWS

At the conclusion of each CITES Conference of the Parties meeting, TRAFFIC should compile and submit a summary of all relevant changes to the implementation of the Convention – including on species listings in the appendices – to the relevant government authorities in the Central African subrefgion, indicating the consequent changes needed to their wildlife legislations. TRAFFIC should also work with networks of conservation NGOs to engage and support the governments to take quicker actions in updating their relevant legislation.

Similarly, after each CBD Conference of Parties meeting, TRAFFIC and other CBD bushmeat partner organisations should work with MINEPDED and MTE, the CBD focal points in the two countries, on practical steps for implementing the critical CBD decisions.

UPDATE INFORMATION, EDUCATION, AND COMMUNICATION MESSAGING

Conservation NGOs such as WWF, ZSL, WCS, WildAid, and TRAFFIC should collaborate with government authorities to update their Information, Education and Communication (IEC) messages and posters with new Class A and Class B species following revisions of the corresponding legal instruments in each country.

NGOs should work with authorities to update IEC campaigns so that law enforcement agencies and bushmeat actors are aware of newly uplisted species and their upgraded protection status.

CHANGE ATTITUDES TOWARDS ILLEGAL BUSHMEAT

TRAFFIC and other NGOs should use simple to understand wildlife documents and posters and messages in behaviour change initiatives aimed at changing the attitudes of:

- law enforcement agencies to reduce tolerance for illegal practices in the bushmeat trade.
- actors along the bushmeat supply chain (hunters, transporters, sellers, and consumers) to follow the law better and reduce practices that further jeopardise the survival of threatened bushmeat species.

LAW ENFORCEMENT (LE)

SUPPORT WIDESPREAD ENFORCEMENT ACTION

NGOs should support the governments to follow-up the IEC campaigns with widespread law enforcement actions targeting newly uplisted species to oblige field law enforcement agents and other bushmeat actors to come to terms with their upgraded protection status. This would deter such activity and make it less easy to trade in protected wildlife species.

FOSTER MINISTRY AND LAW ENFORCEMENT COLLABORATION

Conservation NGOs should also foster and/or support, collaboration between Ministries and LE agencies to collaborate better with IPLCs for the sake of more inclusive wildlife management in compliance with CBG obligations.

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ENDNOTES

[1] Bushmeat (or wild meat) is defined as non-domesticated meat from terrestrial wild mammals, birds, reptiles and amphibians harvested for food or other purposes, including medicinal use, primarily in tropical and sub-tropical forests (CPW, 2015).[2] Gross earnings (USD/km^2) from trophy hunting with lions on quota. Projected income from trophy hunting was used to calculate income per km^2 in each hunting area, followed by a mean for each country.

[2] La viande de brousse (ou la viande d'animaux sauvages) est définie comme la viande non domestiquée de mammifères, oiseaux, reptiles et amphibiens sauvages terrestres récoltés à des fins alimentaires ou autres, y compris à des fins médicales, principalement dans les forêts tropicales et subtropicales (CPW 2015).[4] One community is equal to one village.

[3] Total Market is the name of one of the bushmeat markets in Brazzaville. Unless otherwise stated Total Market in this report refers to this market and not to the sum of markets.

[4] In Cameroon, the Region represents the highest administrative division. The equivalent in the Congo is the Department.

[5] Several reasons may explain this difference in attitude to the research in the two countries. In the Congo, due to language barriers, the vendors were interviewed through two researchers whom they recognised as students gathering information exclusively for their degree programmes. In Cameroon, the authors worked directly in markets where no prior rapport with the vendors had been established, hence there was less trust. In Cameroon, bushmeat sellers link information gathering to sting operations and subsequent raids in their markets. Finally, it also appears easier to get trading permits in the Congo than in Cameroon, making more activities legal in the Congo than in Cameroon where the illegal but tolerated vendors are more vulnerable to punitive actions by law enforcement agents.

[6] The torches and batteries are highly prized tools because hunting is done at night, an illegal practice according to the national laws in the Congo and Cameroon.

[7] For all XAF/USD conversions in this report, we use the modal interbank exchange rate on oanda.com for the survey days in May – September 2019 which is at 0.00173.

[8] This gives the proportion of respondents who indicated that they no longer sell the different taxa. It does not cancel the fact that some other respondents indicate that they are still selling the listed taxa as indicated in Table 2.

[9] Such information from all of Congo is entered into the national SMART database centralised at ACFAP. Access to the SMART database requires official authorisation by the Director General for ACFAP.

[10] Class C species are those with the lowest level of protection under national laws. Class C is defined as all species not included under Class A or Class B. Like Class B species, they can only be commercially hunted and traded with the appropriate hunting and collection permits. However, Class C species can also be locally harvested at any time of the year, outside of authorised hunting areas, and with no hunting permits but only in small quantities using plant-based weapons and exclusively for subsistence consumption by the harvester.

[11] The Cameroon law defines battue as "the hunting of a specifically designated animal species ordered by the service in charge of wildlife for purposes of management or for the protection of persons and property;" (The Prime Minister 1995).

[12] Prior to the April 2020 revision of the lists of protected animals in Cameroon, African Elephant was a Class B animal that was occasionally hunted by professional hunters during the hunting season, subject to the payment of the required taxes. They carried off the tusks as hunting trophies while the meat was fed to their hunting dogs and crew and sometimes also to local communities.

[13] According to the law, landscapes are assigned to private tour hunting operators who manage and run them. However, only a handful are active as many of these areas are closed for a variety of reasons including a lack of tourists, a lack of finances to build and maintain tour facilities, and capacity to patrol and protect the hunting zones.

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