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Where the wild things are...stored? The management and return of seized wildlife

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As more and more wildlife is seized across the globe due to the unlawful possession, handling and trading of protected wildlife species, the wildlife which needs to be managed by enforcement agencies keeps expanding. While seizure data alone is deemed insufficient to measure the illegal wildlife trade, given the complexity of the many drivers and pressures associated, the elevated numbers of wildlife seized provide nevertheless evidence of a global illicit trade that is in progress and seemingly prospering. Disentangling what happens to seized wildlife can be difficult. By using multiple methods including documentary analysis, seizure data analysis and key informant interviews, this study examines seizure management in four countries: Kenya and Uganda in East Africa and Germany and Czech Republic in Central Europe. Wildlife continues to be treated in many instances even after seizure on the basis of continued commodification, or enters a transient state of simultaneous commodification and decommodification, which influences seizure management framing and implementation. Dismissed as the unfortunate collateral of the illegal wildlife trade, live animals, dead animals and derivatives pass in the background. While seizure management processes are underdeveloped, patchy, neglected or burdened by resource constraints, responsible authorities, institutions and individuals struggle to find adequate solutions. By laying this much-needed groundwork for understanding seizure management in practice, opportunities to build on this work to investigate more substantive questions around conservation, environmental and restorative justice are created.

KEYWORDS

wildlife trafficking, IWT, wildlife seizure, seizure management, commodification, repatriation, environmental justice, green criminology

1 Introduction

While much of the wildlife trade is legal or unregulated, illegal wildlife trade (IWT) refers to the taking, trading and exploitation of wild flora and fauna in violation of domestic and/or international laws (Wyatt et al., 2022). Wide-scale poaching and IWT are attributed to be key drivers of the present unprecedented rate of species extinction and biodiversity loss. They may undermine local economies, imperil people's livelihoods, be a vector for transmitting zoonotic diseases and endanger public health (Biggs et al., 2023; Rush et al., 2021; Felbab-Brown, 2017). Seizures have become a popular approach to disrupt wildlife

crime (EIA, 2022; IUCN, 2019). Wildlife seizures may consist of dead animals, parts and derivatives in the form of trophies, food, cosmetics, fashion, ornamental or medicinal products, but they may also involve live animals (IUCN, 2019; UNODC, 2016). Although the size and frequency of seizures is higher in some regions than in others, an overall increase in wildlife seizures across the globe has been registered and the number of wildlife managed by enforcement agencies therefore keeps expanding (CITES, 2022c; Rivera et al., 2021). This yet raises two vital questions: (a) what happens with the seized and confiscated "wildlife" (hereafter live animals, dead animals and derivatives)[1] and how are they managed; and (b) is the repatriation of confiscated wildlife practised and if so, under what circumstances?

Only a few previous studies address the question of live animal seizure management and repatriation (see for example Wyatt et al., 2022; Rivera et al., 2021; Gomes Destro et al., 2019; Collard, 2014). Seizure management usually entails a lengthy process, starting from the interception and control of the animal, over to its immediate care, transfer and transportation to short-term and long-term arrangements, and the provision of veterinary screening (Pascual and Wingard, 2023). Rehabilitation and long-term care are often key to survival as the violence these animals have been subjected to often proves dire to their existence (IUCN, 2019; Wyatt, 2013; Wyatt et al., 2022; Collard and Dempsey, 2013). Unfortunately, seizure management remains overlooked in enforcement and there seems to be a continuing lack of debate on the overall management and return of seized wildlife from a criminological perspective.

The framing of seizures and the value attached to wildlife can have its impact on post-seizure management. On some occasions, seized wildlife may be dismissed as "doomed" collateral of IWT, without exploring the full potential that seizure management could, on a case-by-case basis, perhaps provide (Eudey, 1995; Koontz, 1995). Dead specimens and derivatives are afforded even less consideration, and repatriation is seldom mentioned (de Vries and Anderson, 2022). Given that derivatives represent the bulk of seizures (CITES, 2022a), the question of management merits further scrutiny as we are arguably talking about commodities of great value (Lopes et al., 2017; UNODC, 2010), often linked to questions of resource governance and justice.

Taking examples from Central Europe and East Africa, this study deliberates on the present state and challenges of seizure management, by exploring where seizure management practices of selected countries currently stand, and how they intertwine with national and regional wildlife security concerns. This groundwork is necessary to further explore the potential of seizure management and repatriation in the context of environmental and restorative justice concerns. After all, despite the augmenting pressure to address wildlife crime, and the valiant efforts in recent years to establish some initial structure and guidance to seizure management (Pascual and Wingard, 2023; AZA, 2023; IUCN, 2019), ensuring proper handling of confiscated wildlife remains to this day an invisible aspect in the global response to IWT. This study is therefore both timely and necessary, as it is becoming ever more pressing to take measures to effectively deal with confiscated live animals and wildlife contraband, and contribute to the conservation of endangered wild animal populations.

2 Green criminology, commodification and conservation

Even as wildlife species are declining, some are fetching more than their equivalent in gold or platinum on the black market (East African Community, 2018; UNODC, 2010). The monetary value attached to wildlife, be it dead or alive, entices people around the globe to engage in the illegal sourcing and trade of wildlife (Mrosso et al., 2022). Increasing buyer power, population growth and globalisation have moreover led to the global proliferation of wildlife markets, whether legal or illegal (Felbab-Brown, 2017). Global awareness on the magnitude and associated harm of IWT has at the same time only been slowly developing. As Nurse and Wyatt (2020) point out, despite all advances, a limited notion of wildlife crime currently exists and remains perpetuated in criminological and political discourse. Wildlife continues to be treated in many instances primarily on the basis of the sustainable use of wild flora and fauna, which allows for their continued commodification and exploitation, seeking only to regulate the most excessive and violent of human activities.

Distinctions exist, however, in the commodification of live animals and in the commodification of dead animals (including body parts and derivatives). According to Collard (2014), live animals are put together into new animal subjects that derive their value from the very fact of being alive. Through the exoticisation of their wild identity, their former life linked to their native habitat serves to enhance their value as lively commodities through their association with faraway places. But it can also form part of local and regional cultural practice, as in many countries keeping wild animals in captivity builds on notions of tradition, popularity and aesthetic appeal (Souto et al., 2017; Alves et al., 2016). In the case of dead animals and derivatives, the process of commodification ultimately places a value on the dead state of wildlife, to their bodies and their parts. Through the physical separation of the to-be-commodity from the animal (for instance, when skins are removed from the bodies of wild animals) and the moral separation of the animal from its function and place in its respective ecosystem, wildlife is isolated as a resource to be "harvested" for commercial use (Castree, 2003). Wildlife thus ceases to be seen as a victim through the commodification process, since the final commodity stands separated from its former animal existence.

1 It should be acknowledged in this context that the illegal trade in wild flora constitutes another significant wildlife market and that enforcement actions in this regard remain just as crucial. Seizures of wild plants, timber and plant derivatives can even surpass those of wild animals and animal derivatives (TRAFFIC, 2024; Plesník et al., 2023a). But as this form of IWT and its management post-confiscation receives in many instances even less attention than their animal counterparts, it presents another striking hole in our understanding.

By negating all but their economic value, wildlife suffering receives little or no significance, presumably because it is not regarded as a "real" crime, but rather as a minor offence against property[2], and therefore without victims to speak of (Beirne, 2007). Yet the question of harm is eminent as the impacts of illegal capture, transport and captivity are often detrimental to animals physically, psychologically and emotionally (IUCN, 2019; Wyatt, 2013). Many do not survive trafficking and die during the act of poaching, handling, transporting, at their destination, at the point of and during seizures (Wyatt et al., 2022; Collard and Dempsey, 2013). This is without counting the harm sustained by wildlife that are killed and transformed for the purpose of trophies and other commodity forms. For this reason, Beirne and South (2007) posited that green criminology should be a harm-based discourse that addresses any animal abuse that leads to animal suffering. After all, animals, whether construed as wild, domestic or commercial, should be considered beings that have intrinsic value and an interest in living unharmed.

Seizures and confiscations as part of the criminal justice response to wildlife crime are in this regard important practices to review, as the question of harm may also be of concern in relation to seized and confiscated animals. Seizures designate a temporary custody placed on the wildlife by authorities, during which the owner retains their legal ownership over the wildlife, although authorities may have temporarily deprived them of the actual wildlife itself (Pascual and Wingard, 2023; IUCN, 2019). Reasons for seizure can vary and may include missing, incomplete or fraudulent paperwork, violations of welfare standards during transport, as well as the unrightful possession, transfer or handling of protected species (TRAFFIC, 2024; D'Cruze and MacDonald, 2016; Wyatt, 2013). Confiscations, on the other hand, designate the point at which the wildlife is placed in the permanent custody of the authorities, usually after the court has ruled that the legal ownership of the respective wildlife should be ceded to the state due to illegalities that cannot be overcome. It is therefore only after confiscation that responsible authorities can decide upon the long-term management of wildlife. This separation between seizure and confiscation is crucial since different management protocols apply, which delimit the scope of actions authorities are permitted to take (Pascual and Wingard, 2023; IUCN, 2019). Enforcement priorities commonly focus on the need to minimise harm and preserve the life of seized and confiscated wildlife, securing and preserving criminal evidence, while at the same time preventing the transmission of zoonotic diseases (Pascual and Wingard, 2023).

On an international level, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) provides a number of guidelines on how countries can handle wildlife seizures, in particular live specimens. The three recommended management[3] options for live specimens are euthanasia, long-term captivity and repatriation to the source country/country of export. While the convention requires that repatriation of confiscated CITES-listed animals to the country of export is to be considered, the return of the animal to the wild is not obligatory. Release to the wild is recommended only under certain circumstances, with reference to IUCN guidelines on confiscated live specimens (CITES, 2022b). Euthanasia, as the CITES guidelines state, being in many cases 'the simplest and most humane option available' (CITES, 2022b, 10) for live specimens. The recommended action for dead specimens and wildlife contraband, on the other hand, is currently sidelined under the disposal of 'confiscated specimens other than live animals and plants', namely that of confiscated and accumulated dead specimens (CITES, n.d.). A distinction in recommended disposal options is made between Appendix I (species listed as most endangered where commercial trade is prohibited) and Appendix II and III species (species listed where trade is permitted but regulated). Confiscated dead specimens from Appendix I may only be re-used for scientific or educational purposes and must be otherwise stockpiled or destroyed. Confiscated dead specimens from Appendix II and III species may be disposed of in a manner consistent with the convention (CITES, 2022b).

But even though the vast majority of countries are members to the convention, practical implementation is not guaranteed as countries are left to harmonise and enforce the convention within their national legislation (Arroyo-Quiroz and Wyatt, 2019; Maher and Sollund, 2016). When it comes to seizure management in particular, insights into the practice on the ground are hard to obtain (CITES, 2019). Poor reporting compliance, along with non-standardised, low-quality and missing data remain an on-going area of concern (Plesník et al., 2023a; D'Cruze and MacDonald, 2016).

What characterises the complexity of seizure management among other things, is the inherent competition between conservation and animal welfare agendas, two perspectives that are not necessarily opposed, but which should not be confused. Frequently they function and think in parallel, but where conservationists focus broadly on the restoration and health of the biotic community as a whole, animal welfareists focus on defending the rights and well-being of individual animals (Beirne, 2007; Jimenez and Cadena, 2004). From a conservation point of view, the long-term welfare of wild populations should be given priority over the welfare of individual animals. As such, concern for the protection of individual animals arises solely when the population of animals representing a species becomes so small that the death of any individual may lead to its extinction (Cuarón,

2 Speciesist language remains problematic to this day, even in debates about wildlife crime, as it is often laced with implicit assertions that deny animal sentience and their right to live a life harmfree. In an effort to be inclusive, some green criminologists have resorted to the use of the term "non-human animals", to move beyond the artificial dyad between "humans" and "animals". Yet this solution seems hardly satisfactory given that, as Beirne (2007) notes, it entails the same offence as referring to (human) women as non-male humans. In absence of a convincing terminology, the objective therefore remains to at least reflect on the use of language, as it has a significant impact on the way we approach, conceptualise and deal with wildlife and wildlife crime.

3 CITES uses the term "disposal" when describing the management of illegally traded and confiscated wildlife, indiscriminate of whether it concerns dead specimens, derivatives or live animals. Although this terminology draws on general customs parlance for inanimate goods, the adoption of the terminology by CITES has since come under heavy criticism for objectifying sentient wild animals (Pascual and Wingard, 2023; Rivera et al., 2021).

2005; Hargrove, 1995). This can also have its bearing on how the management of confiscated animals is approached. There may be disagreements as to what interests animals have and what management should look like.

From an animal welfare perspective, there is a moral predisposition against captivity as the deprivation from liberty is considered presumptively wrong (Jimenez and Cadena, 2004; Jamieson, 1995). Yet, biodiversity loss is a risk when confiscated animals are released back to the wild inappropriately. The loss can come from the spread of pathogens from the released animals but also from the introduction of animals to non-native areas. It is difficult to establish with certainty that a specimen is pathogen-free. Nor is it easy to determine the provenance of confiscated wildlife with certainty as many species naturally occur in many sites. But as each population has a unique evolutionary history, their pathogen resistance and genetic make-up may diverge from other populations. This can pose a risk as much to the to be released specimen as to the population and ecosystem in question (Pascual and Wingard, 2023; IUCN, 2019; Jimenez and Cadena, 2004). Record-keeping on releases and reintroductions of confiscated animals are notoriously poor, and according to the IUCN, releases remain rare (Rivera et al., 2021; Zhou et al., 2016). Even so, successful and failed attempts at release of confiscated wildlife have been documented (Oliveira et al., 2020; Gray et al., 2017; Beck, 1995; Jamieson, 1995).

Sadly, confiscated animals are rarely in a suitable condition to be released in the first place (Felbab-Brown, 2017). In many cases, it so becomes that releases are actually undesirable from both an animal welfare perspective as well as from a conservation perspective. Another divisive topic can be the question of euthanasia. From a conservation perspective, euthanasia may be an option to consider, the underlying principle being that a humane death may be in the animal's best interest (Jimenez and Cadena, 2004). From an animal welfare point of view, however, the taking of an animal's life for reasons other than relieving suffering seems hardly acceptable and not in the wildlife's interest (Wyatt et al., 2022). The management of confiscated wildlife thus clearly rests on a fine balance between what can be quite distinct priorities. The context in which such efforts are carried out is important, as the rights, protection and position of wildlife are contingent on social geographies.

3 Methods

3.1 Geographic focus and regional considerations

This study examined seizure management in four countries across two regions: Kenya and Uganda in East Africa and Germany and Czech Republic in Central Europe. Kenya and Uganda are long recognised as hotspots for IWT. While elephant and rhinoceros poaching has dropped in recent years, the two countries remain important source, transit and destination[4] points for IWT (KWS, 2021; EIA, 2018; MTWA, 2020). Borders are porous and large volumes of ivory and rhino horn leaking from stockpiles and transiting from other countries continue to be illegally exported (EIA, 2018; Weru, 2016; Rossi, 2018).

Nowadays, Kenya and Uganda are part of a variety of bilateral, multilateral and regional frameworks targeting IWT, including the Lusaka Agreement, the regional strategies of the African Union (AU) and the East African Community (EAC), as well as regional wildlife enforcement networks. The majority of the regional frameworks yet make no mention of measures relating to managing seizures. Alone the Lusaka Agreement makes reference to the possibility of repatriating seized wildlife to the country of original (re)-export (Lusaka Agreement, 1994).

The EU is one of the world's largest markets for wildlife and although European countries have become less important consumers of African wildlife themselves, they remain a vital conduit for further transit to Asia (Rihova, 2023; Arroyo-Quiroz and Wyatt, 2019; Sina et al., 2016). The Czech Republic is considered to be one of four countries in the world most involved in the illegal trade in rhino horn (MV CR, 2018). Enforcement measures therefore focus on trophies for which it has received international recognition by CITES as the only country so far (Plesník et al., 2023b). Although rhino horn trafficking has since decreased, it is believed that wildlife trafficking networks continue to operate in the country (Rademeyer, 2016). Germany is the leading EU destination country for IWT and one of the main buyers involved in the legal and illegal trade in exotic pets worldwide (WWF, 2023; Altherr et al., 2020). Demand is particularly high for reptiles, amphibians and, to a lesser extent, small mammals (WWF, 2023; Altherr et al., 2020). For an overview of the most frequently seized wildlife in the four countries see Table 1.

When considering the Czech Republic and Germany, it is necessary to examine their practices also in the broader context of the European Union, since both countries are regionally harmonised through EU frameworks and directives issued. EC Regulation No 338/97 Art. 16 stipulates among other things the seizure, and where appropriate (Council Regulation (EC) No 338/97,1996), the confiscation of specimens that do not meet required standards of documentation and/or transportation. As Member States are not required to record or publish steps taken after the seizure and confiscation of wildlife, an overview of seizure management practices across the EU does not exist (Altherr et al., 2020). Common measures include that derivatives[5] labelled as containing annex-listed wildlife may be seized without prior verification or testing. For live animals that have been introduced into the EU, repatriation may be considered an option. Although the new EU action plan to combat illegal wildlife trade (2022) aims

4 It should be borne in mind that IWT supplies not only international markets but also local ones in source countries and nearby areas (Mrosso et al., 2022).

5 Foods, medicines and cosmetics are of particular note. The most prominent examples thereof are Traditional Asian Medicine (TAM) and Traditional Chinese Medicine (TCM). These derivatives have gained increasing notoriety due to concerns that their increased use will exacerbate pressure on endangered species, including saiga antelope, pangolins, tigers and black bears, owing to increased domestic and international demand (Esmail et al., 2020).

TABLE 1 Most frequently seized wildlife mentioned by key informants according to country[6].

Seizures	Kenya	Uganda	Czech Republic	Germany
Dead animals, parts and derivatives	Ivory, rhino horn pangolin scales, abalone, bushmeat, animal skins	Ivory, rhino horn, pangolin scales, bushmeat, animal skins	TAM/TCM products, corals, reptile leather products, ivory antiques, furs	TAM/TCM products, corals, ivory, animal skins, furs, reptile leather, turtles, snails
Live animals	Pangolins, tortoises, leopards, African grey parrots	Pangolins, parrots and exotic birds, primates, reptiles	Reptiles, turtles, amphibians Incidences of eel smuggling, trade in lynx, tiger cubs and parrots were recorded.	Amphibians, turtles and reptiles

to improve enforcement, the management of seized and confiscated wildlife remains to this date only marginally addressed.

This cross-regional and cross-cultural focus was chosen because of the transboundary nature of IWT and the need to consolidate insights along trafficking routes (Pascual and Wingard, 2023; Milner-Gulland et al., 2018). Understanding local and regional differences is important when looking at enforcement and criminal justice approaches, in order to reflect on needs and successes on a more equal footing. Central Europe and East Africa were chosen to investigate certain IWT patterns identified by previous research (TRAFFIC, 2023; UNODC, 2020; Sina et al., 2016). African experiences still remain underrepresented in governance literature (Iroulo and Tappe Ortiz, 2022) and even when it comes to seizures and confiscation management, data is limited despite its obvious IWT relevance. An emphasis was therefore placed in this research on integrating cross-cultural perspectives, while being reflective to produce knowledge with and guided by practitioners on the ground. All the more so, since Arroyo-Quiroz and Wyatt (2019) raise in relation to enforcement responses, 'trying to uncover the smuggling of a live bird is very different from uncovering the smuggling of a cactus seed' (p.33). In other words, based on the nature of enforcement and IWT, seizure management activities are experienced, perceived, and understood differently.

3.2 Data collection and analysis

To obtain insights into the countries and overall thematic, multiple methods were combined including documentary analysis, seizure data analysis and, above all, semi-structured interviews with key informants experienced in seizure recovery, management and/or repatriation processes related to wildlife trafficking. Since the focus was on how seizure management takes place in practice, the interviews provided the means of probing the situation, offering privileged complementary insights into the operationalisation of seizure management policies and structures. Interviewees were selected using purposive sampling and snowball sampling. Purposive sampling consists of recruiting people that fit a specific profile (in this case renown expertise with the topic under study), thereby ensuring the most relevant sample possible. Snowball sampling refers to the method of identifying future respondents based on the recommendations of an initial informant sample. Particularly for sensitive criminological research that implicates hard-to-reach actor groups and institutions, snowball sampling has been recognised as a means of overcoming barriers to accessing information (Heap and Waters, 2019).

Interviews were conducted from the end of October 2023 to April 2024. In total, 31 interviews were conducted with 37 key informants. Contributing participants were drawn from wildlife management authorities, government departments, international organisations and regional bodies, customs authorities, zoos/museums, academia, animal welfare NGOs and enforcement networks (see Table 2). 25 interviews were held via phone or an online meeting platform. 3 interviews were conducted in-person on institutional premises. For 3 interviews, responses were received in written form. Interviews lasted between 30 to 201 minutes, with an average length of 60 minutes. Four interviews were conducted in pairs, one interview was held with three key informants and the rest was held with one person at a time. 19 interviews were held in English, nine interviews were held in German and three interviews were held in Czech.

A participant information sheet and consent form were provided to each participant in advance via email. Interview participant contributions were anonymised (P#1-37) unless stated otherwise. In the spirit of Ned et al. (2022), interview participants were given the choice to give permission to have their real names used and disclosed, as to acknowledge their valuable contribution made to this study (see annex). Given the cross-cultural aspect of this study, the measure was all the more important to ensure that epistemic vulnerability is not perpetuated by cancelling out voices from research participants as knowledge producers. Bearing in mind that, for this study, professionals with long-standing experience and expertise in the field were consulted, their consent and willingness to have their name made explicit for this study was deemed to outweigh any risk of association. 'One could ask, is there a way we can be accountable to our relations, if we hide the people we worked with, if their knowledges are deprived of names and de-identified?' (Ned et al., 2022, 47-48).

Two separate interview rounds were conducted. The first interview round sought to consolidate the available body of existing knowledge on seizure management and the international governance mechanisms related thereto, in order to gain a better understanding of current implementation and identified best practices. In this manner, the objective was to build on existing practical knowledge on what is deemed important, missing and worthy of further scrutiny. Independent experts were consulted representing a variety of positions, geographic locations, and professional agencies. One risk of this initial expert consultation was that based on the informant

6 Dead wildlife, parts and derivatives are prevalently seized. Live animal seizures are perceived as rare in all the countries examined.

TABLE 2 Key informants consulted according to their professional background (multiple affiliations included).

Key informant profile	No. of interviewees
Ministerial wildlife/ environmental authority	3
(Wildlife) law enforcement authorities	10
Customs authorities	3
Zoos/sanctuaries/rescue centres	4
Museums	2
International organisations/ regional bodies	2
Judicial authorities/prosecution	4
Research/forensic laboratories	4
Animal welfare/conservation NGOs	7
Wildlife trade and enforcement NGOs	5

selection, certain experiences or questions may not have been raised or may have received less attention. With this in mind, the interview round tried to comprehend a diverse set of experiences to offer a starting point for reflection on this subject. In total, 11 experts were consulted. Their responses were coded to identify initial themes relevant to seizure management, upon which further issues for consideration were added to the country study questionnaires.

The second interview round was specific to the countries and professionals were consulted, who either are directly implicated in one or all steps of the seizure recovery and management process on the national level, or collaborate on its aspects on the regional level. 15 key informants were consulted for Germany and for the Czech Republic. 11 key informants were consulted for Kenya and for Uganda. Responses were coded according to whether the seizure management referred to live animals or dead specimens and derivatives. The process was also broken down according to the countries. In a subsequent step, connections were traced between the different codes, examining how they are (inter)related, with a particular focus on comparing the saliency of categories.

Next to this, a documentary analysis was conducted of existing legislative and policy documents; grey and scientific literature and accessible seizure databases and reports; published local and specialist press stories; as well as written correspondences collected throughout the research process from actors, responsible authorities and gatekeeper institutions. The collected information was in the final step collated and triangulated with the results from the interview analysis to identify current needs and challenges, best practices and opportunities for change.

4 Findings

4.1 Kenya

In Kenya, all matters relating to wildlife law enforcement and trade are laid down in the Wildlife Conservation and Management Act (WCMA) Cap. 376 (2013). The Kenya Wildlife Service (KWS) bears the main responsibility for enforcement and has the mandate to seize wildlife, keep seized trophies and audit them on behalf of the government. Seizures made by other enforcement agencies are handed over to KWS. This can happen regularly as particularly at borders, multi-agency teams are present. But as P#29 notes '[Seizure management] It's a subject that, I think, a lot of actors who are trying to do interventions do not consider'. Steps to be taken with regard to seizures are not prescribed beyond mandates and that seized wildlife subject to speedy and natural decay are to be destroyed without needing to await the court's orders. More recently, standard operating procedures (SOPs) were drawn up in collaboration with the Uganda Wildlife Authority (UWA) on the management of wildlife exhibits (P#28-29).

Initially, seized wildlife are stored in so-called "exhibit rooms", which are usually secured custodial rooms of KWS. They can also be in a restricted zone of a court under the prosecutor, under the registry, or at the police station (P#27-29). However, KWS usually tries to avoid storage outside its premises. Storage facilities of other authorities are neither always well-administered nor equipped, which not only poses security risks but also can impede the prosecution of cases (P#28). While WCMA (2013) does not specifically stipulate that offenders are to pay for the costs associated with the management of seized wildlife, section 105 stipulates that a court may order that the cost of disposing of livestock or any other thing provided for in the subsection be borne by the person convicted there-under, which may or may not include the cost of disposing of wildlife trophies. According to key informants, however, costs of disposal or management are never factored in final court orders.

When it comes to live animal seizures, authorities usually try to produce them in court at the first arraignment to ask for disposal orders at the earliest opportunity. Admissibility of criminal evidence still constitutes a barrier to conscientious seizure management as presenting digital evidence can pose challenges. Although a new section (Section 78A) was passed into the Security Laws (Amendment) Act of 2014, which henceforth allows the admissibility of digital evidence at trial, it is not applied consistently across the country and cases remain often contingent on wildlife being produced in court (Weru, 2016; P#29). Seized live animals may thus be held in limbo for the duration of the case. Very few enforcement authorities furthermore possess the necessary expertise and equipment to take care of wildlife. Training on live seizure management is often missing and there is a perpetual risk that wildlife experience further harm because they are not being handled or fed appropriately (P#28-30).

> You find some of the species are going to be dying in that process. And I always find that very problematic because it [is] why you are actually even prosecuting these people in the first place (…) the issue is ensuring that species actually survive and are not killed through the criminal justice process (P#29).

After confiscation, when the animal is healthy, release into their natural habitat is preferred. Confiscated animals that cannot be released back into the wild due to health issues or other reasons are

placed in wildlife sanctuaries and rescue centres. The main facility is the KWS-run Nairobi Animal Orphanage (KWS, 2021; P#30). Confiscated animals may also be transferred to zoos and accredited wildlife institutions to participate in breeding programmes, research initiatives, or conservation education efforts. According to Kenya's most recent CITES implementation report (2021), the majority of confiscated animals are in fact placed in designated rescue centres and private facilities.

Dead wildlife, in particular trophies, constitute the main focus of management efforts in Kenya. When the case is concluded, the court gives an order for the wildlife to be handed over to KWS. Management options comprise mainly stockpile management and destruction (P#27-30). Further sale of confiscated wildlife or trade is prohibited under WCMA (2013). Stockpile management is handled by a distinct department of KWS that alone has access to the strong room as a security measure. The cabinet secretary is informed of the amount and provenance of trophies stored and may, when the storage is full, issue a process of destruction (P#28). When it comes to trophies, Kenya has pioneered the burning of ivory as the first country in the world (Nadal and Aguayo, 2016). Destruction includes first the crushing of ivory or rhino horn and then its burning to prevent it from re-entering the illegal market (P#29). Yet, not all wildlife is being destroyed and as has been remarked, storage facilities of the KWS are becoming full, which poses a risk to proper management and disposal. Destruction remains controversial and public support for destruction has been considered waning. It is publicly debated as whether the confiscated trophies should not rather be preserved for other purposes or used to raise conservation funding (P#27-29). The official government stance however remains set on destruction due to concerns over instigating a new poaching crisis.

> We just need to move from this false dichotomy of choice of should you burn or should you keep until CITES allows you to sell (…) Countries should be encouraged to find different ways of commoditising or finding value out of their stockpiles. We should truly innovate solutions around how we make these seized items valuable. Without selling them, without trading them' (P#29).

A third management option for dead wildlife, although less applied, is the reuse of seized wildlife for research and education purposes. Some wildlife products are used for example by law enforcement authorities for training or to train detection dogs. Confiscated animal skins may moreover be repurposed by museums for stuffing and education (P#28; P#30). Alternative public uses for highly valued wildlife such as ivory or rhino horn in museums or education facilities have been however ruled out, as the security risks are deemed too high.

Under WMCA (2013), repatriation is not an option. Seizures are according to the key informants regularly communicated to other countries, when identified as such (P#27-29). Kenya itself has filed several requests for repatriation with regard to the large ivory seizures made in Vietnam, Thailand and China (EIA, 2018; P#28-29). But despite established international cooperation frameworks and MLA requests filed, they were unsuccessful. Nevertheless, the repatriation of wildlife to the country of origin was generally deemed important and key informants made reference to principles of *in-situ* conservation, restorative justice, and national sovereignty. While cost has been noted as a constraining factor, key informants nevertheless highlighted that in the case of Kenya's own requests, Kenya was prepared to bear the costs (P#28-30). The failure to reach repatriation was mostly attributed to the unwillingness of confiscating countries to repatriate the wildlife back (P#28-29). Repatriation was mostly mentioned in relation to dead wildlife and only when it was considered valuable (P#27-30). In the context of Europe, trafficked wildlife is not deemed valuable enough to warrant a repatriation request.

> It's very rare. You're seeing cases rerouting through it, it's often transiting, not as a final destination as such. And not for the kind of species that a lot of African countries are so bothered about. So it's mostly birds, pet-like, you know, wildlife (P#29).

Species identification to determine the type and provenance of wildlife proves to be a reoccurring challenge (KWS, 2021). There are very few forensic experts in the country able to provide expert evidence. Ivory and rhino are usually taken to the National Museums of Kenya for identification purposes, even though KWS established a new laboratory for forensic and genetic analysis. The capability for analysis still remains limited, however, as DNA databases continue to be built (KWS, 2021; P#29). Other challenges that have been raised in reference to seizure management overall include interagency conflicts that may arise due to competing mandates on one hand, and the insufficient understanding of existing legislative frameworks, policies and procedures, on the other hand. This has resulted in some cases in "turf wars" between various law enforcement agencies, as well as between wildlife management authorities when they are operating in the same place (P#28-29). But above all, stockpile management issues the greatest challenge. Discrepancies in management standards prevail, with many storage facilities away from the centre not being up to par (P#29-30). Corruption is pervasive, facilitated by weak accountability mechanisms at all stages from crime scene to confiscation management (MTWA, 2020; EIA, 2018). 'Sometimes they leak information to the smugglers (…) Sometimes, like I said, this ivory tends to disappear within the strong rooms.' (P#27).

4.2 Uganda

In Uganda, measures to be taken with regard to wildlife seizures are prescribed by the Uganda Wildlife Act (2019). The main authority on wildlife law enforcement is UWA, who is the custodian of all wildlife and has the mandate to conduct seizures. Certain aspects of enforcement are moreover done in collaboration with other enforcement agencies. When wildlife is seized by authorities other than UWA, they are required to notify UWA within two days. Wildlife are then usually taken to the nearest UWA facility or otherwise to a nearby police facility for safe custody,

where they are marked, numbered, and recorded as exhibits. When the hearing starts in court, the magistrate requires the wildlife to be brought physically on-site. One prevailing challenge in this respect is the storage capacity available for the temporary storage of wildlife (P#31-33).

> The Chief Magistrate's office, it's actually operating as an exhibit store. Why? Because the police stores are full. The wildlife agencies are full. Now some of them are being kept in court precincts. And it's a security risk (P#29).

The seized wildlife usually therefore remains in court until the case is disposed of, at which point it is transferred back to UWA (P#31-32). While the Uganda Wildlife Act (2019) does not stipulate that offenders are to pay for the costs associated with management, compensations are in some cases requested by prosecutors for the incurred cost that the enforcement authority has gone through to investigate and prosecute this case. But as P#31 remarks, this is a new practice that has really developed in the last four years.

The management of confiscated specimens falls to the Executive Director of UWA. When it comes to live animals, the preferred management option is to return the animal to its natural habitat, when deemed capable to survive on its own. When deemed incapable of surviving in the wild, management options include (1) the donation of the specimen to a recognised educational, zoological or scientific institution, either for payment or free of charge; (2) keeping the specimen in captive management in own custody and (3) the "destruction" of the specimen (Uganda Wildlife Act, 2019). In practice, confiscated live animals are brought to the Uganda Wildlife Education Centre (UWEC) zoo in Entebbe, which is the mandated facility to conduct the rescue, rehabilitation and release of wild animals (Rossi, 2018; P#30; MTWA, 2021). According to the 2019-2020 implementation report (MTWA, 2021), the majority of confiscated specimens are placed there. Time is considered crucial in the management of confiscated specimens. Management decisions are usually expedited to ensure that animals stay alive and to prevent any further harm and stress. Yet, since UWEC is the only available facility for confiscated wildlife, challenges can arise as to getting the confiscated animals there (Rossi, 2018).

> We had to struggle trying to know what kind of food these birds could be fed as they were quickly being moved to UWEC. But of course, we lost, I think, three or four birds in that process of handling. You had to mobilise transport to ensure that the birds are moved around 400 kilometres. So, it really takes a bit of arranging (P#32).

Dead wildlife constitutes the main focus of management efforts also in Uganda. When confiscated, UWA decides on the management of the wildlife in consultation with the Ministry of Tourism, Wildlife and Antiquities. Management options include (1) destruction; (2) donation to a scientific or educational institution; (3) sale of the wildlife either in its entirety or in part; or (4) stockpile management (Uganda Wildlife Act, 2019). But in practice, wildlife is mostly kept in safe custody and stored away (P#27-30). Destruction is practised only with regard to bushmeat or other perishable foods and derivatives (P#29; P#31). Although sometimes enforcement authorities may also take advantage of confiscated meat to feast on it (P#32). Trophies are stockpiled as their sale is prohibited and the government opposes destruction.

> It's a political discussion. Ivory is a high price product (…) UWA has found itself stuck with huge piles of ivory and other specimens or trophies, mainly because the government has not made a strategic decision (P#31).

Destruction remains a contentious issue on the national level, as well as on the broader regional level. The challenge therefore is the provision of adequate storage facilities. A new ivory strong room was built in 2016 and available resources strengthened, including the establishment of a wildlife crime task force and a specialised wildlife crime court, the development of SOP guidelines for exhibit management and the expanded use of forensic analysis (MTWA, 2021; EIA, 2018). But as P#33 notes, there is only so much these measures can do. 'You can't fight corruption with capacity-building; What you need to have is to completely remove it from the equation. Our problem is corruption. It's not about capacity'. Corruption remains pervasive and stockpile thefts and leakages have been recorded since 2000 (EIA, 2018).

Alternative uses for research or education purposes through donation are not practised to the knowledge of those interviewed. Repatriation is not considered a management option under the Uganda Wildlife Act (2019) and also according to key informants, it is not practised. While the majority of the bigger past ivory seizures have been identified as not coming from Uganda, no repatriation took place as to these particular countries. Nor have any of the interviewees heard of any demands for repatriation by other countries for any of the wildlife seized in Uganda. Similarly, some of the ivory that has been seized in Kenya and Tanzania, have been identified as coming from Uganda in the past. But also there, repatriation has not been enacted (P#31-32).

Possible barriers to repatriation raised by key informants included the lack of resources of some countries to lay claim on wildlife confiscated in other countries, the lack of established frameworks to facilitate international cooperation, as well as the missing capacities by many to conduct proper forensic analysis (P#29-33). In the case of Uganda, key informants felt that many seizures, even when the source country has been identified, are not necessarily disseminated. Uganda's own framework was also noted to be old and in need of review to facilitate international cooperation (P#31). But generally, no great interest to engage in repatriation for its own wildlife was expressed.

The absence of a forensic lab and incapacity to use forensic technology to support investigations was raised as a big shortcoming (MTWA, 2021; EIA, 2018). While large ivory seizures have been sent to the US for DNA analysis, smaller seizures are usually left be as they are believed to stem from Uganda (EIA, 2018; P#32). For other seized wildlife, local experts are consulted to provide species identification at court. In this

regard, the pioneering of mobile scene of crime kits for testing seizures was noted as instrumental in supporting national casework. But generally, forensic analysis was deemed to fall short, impacting the prosecution of wildlife crimes (P#32).

While interagency cooperation has been stepped up, especially between the different wildlife and security authorities, still more needs to be done also to raise awareness (P#30; P#32-33). 'I put emphasis on awareness, on training and on strengthening intelligence proactively to deal with these things. I don't want to always do post mortems' (P#32).

4.3 Czech Republic

In the Czech Republic, steps to be taken with regard to seizures are prescribed by Law 100/2004 Sb. (Zakon o ochrane druhu volne zijicich zivocichu a plane rostoucich rostlin regulovanim obchodu s nimi a dalsich opatrenich k ochrane techto druhu a o zmene nekterych zakonu (zakon o obchodovani s ohrozenymi druhy), 2009), which gives instructions as to which actions are to be taken by which actors, procedural deadlines and contingency plans. The Ministry of Environment acts as the main executive body and is responsible for overseeing the management of confiscated wildlife. The Czech Environmental Inspectorate (CEI) meanwhile conducts enforcement on the ground with CEI wildlife inspectors having the competency to do inspections, impose fines, seize and confiscate specimens (Law 100/2004). When other enforcement authorities intercept wildlife, they inform the CEI to determine measures to be taken.

Some tensions and discrepancies can nevertheless be observed when it comes to the operationalisation. As far as exports are concerned, the situation tends to be more complicated as the infrastructure does not allow for easy inspection. It is also foreseen by law that seizure management costs are to be recovered, but this is not enforced. 'I don't know if the amendment may not be removed, because it is impossible to implement in practice (…) It just seems unnecessarily bureaucratic an effort' (P#12).

When it comes to live animal seizures, the CEI must report the case to the appropriate veterinary authority and transfer the wildlife to a rescue centre (Law 100/2004). The Czech Republic has designated CITES rescue centres specialised by taxon. They are licensed by the Ministry of Environment, and in most cases belong to the zoo. One major challenge is that rescue centres are not obliged to receive seized wildlife. As many are overloaded, it happens fairly often that they refuse to take care of new animals.

> They simply do not want to. There can be a number of reasons, the specimen may require to be quarantined, or spoken again bluntly, the animal simply may not be interesting (P#12).

It becomes therefore often necessary to consider alternative placement options including 'any other rescue centre that is willing to take the specimen in. Even if the rescue centre is not directly approved for the respective species' (P#12). Zoos may be contacted but institutional unwillingness is also there a barrier to placement. Private animal keepers and breeders are occasionally also considered, especially when large quantities of animals are seized, as rescue centres and zoos often do not have the capacities to accommodate them all. It may even be that when an animal should be seized and removed from the owner by law, it is left there for want of a more suitable placement (P#12; P#14). Given that rescue centres are specialised by taxon, the placement of certain species also presents difficulties, in particular large carnivores such as big cats and bears, as well as aquatic specimens (MZP, 2023, 2021; P#12-13).

In the case of birds from outside the EU, it is compulsory to place them in rescue centres with approved quarantine facilities (MZP, 2020). But according to key informants, there is no such facility, or at most one, that meets this requirement. To overcome this situation, it has become common practice to call veterinarians ahead to the rescue centre that has no such quarantine facilities, so that they can inspect the wildlife and decide whether or not they can be placed inside. In view of the risk of infection, however, a number of zoos have ceased their activities as rescue centres and have withdrawn from their charge (Potucek, 2013; P#12-13).

When confiscated, their management falls to the Ministry of Environment (Law 100/2004). According to the ministerial directive MZP 08/2018, a tender process is organised to redistribute all confiscated specimens, dead and alive. A valuation commission determines an estimate price for this purpose. Since redistribution is free of charge, the valuation is intended to serve only as a record price, to be stipulated in the donation contract. Live animals are recommended for transfer to zoos, rescue centres or other approved private facilities. For native wildlife which also falls under Law 114/1992 Sb., release to the wild is to be considered in priority. Releases to the wild remain rare, however. Confiscated animals are usually donated to a zoo or even kept by the rescue centre where the animal was placed initially (P#12-14). Euthanasia is not considered a management option. Although the national action plan on IWT formally allows the preventive culling of imported birds from outside the EU, when approved by the State Veterinary Authority, due to missing quarantine facilities (MZP, 2020).

Dead wildlife, parts and derivatives are at first stored at CEI for safekeeping. When a certain level of storage has been reached, the wildlife is transferred to the Ministry of Environment, whose storage capacity is even more limited (P#12-13). For dead specimens, the Ministry may recommend the transfer to facilities where they can be used for scientific research, environmental education and/or awareness-raising. Priority is in this regard given to ministerial departments, CEI, the CITES Scientific Authority and customs authorities. Only if these state authorities do not express an interest, are other public institutions considered, such as research institutes, museums, schools, and zoos. Further redistribution to others in return for payment is prohibited.

> We put to use some of the more interesting commodities we seize (…) Environmental education, that is the buzzword. That's what we use the confiscated specimens for. Not only the dead specimens, also the live specimens are used for environmental education, as they are in zoos (P#12).

Repurposing wildlife often evoked a dichotomy where value, especially reparative value, was attributed while at the same time

any association with value was being removed. This was particularly visible in relation to dead wildlife and the underlying demand for purpose. If the wildlife cannot be redistributed due to poor condition, biosecurity risks or if no one expresses an interest in the confiscated specimen, destruction may also be considered (MZP, 2018). In the past, seized rhino horn was thus burned in a coordinated manner with other countries in an attempt to signal that it has no value and should not be commodified. Similarly, a public burning was initiated for dead snakes contained in tonics and liquids after tender processes were unsuccessful.

Repatriation is generally not considered a management option. 'Our national legislation does allow for that option, we just don't implement it (…) I cannot even imagine how we would be able to repatriate a specimen that we seized at the border' (P#12). Practical challenges were stressed to outweigh the possibility to consider repatriation and interest in repatriation by other countries has not really been registered. Putting confiscated animals, when suitable, into rescue programmes was considered more promising. A further barrier was also the lack of trust with regard to some countries' intentions. 'You need a contact whom you trust that the animals really will end up in nature and won't reenter the illicit market. So, it really almost never comes to repatriation' (P#13). Key informants were doubtful that seizures are regularly communicated to source countries, even if identified. Barriers to formal international cooperation and difficulties in obtaining information from other countries were also noted (MZP, 2020).

Overall, some leniency and flexibility were emphasised to accommodate more uncommon cases. One such example presented the seizure of a white tiger in 2022 and in 2023, which gave way to new collaborations, including between the Czech Ministry of Environment and the animal welfare organisation FOUR PAWS for finding a suitable placement. While temporarily placed in Zoo Hodonín, the tiger was transported in the end to the wildlife animal sanctuary TIERART in Germany that is specialised in wild cats (P#22-23). Another case in point was the seizure of 70.000 glass eels in 2019, which were in the end released into the Czech river system in cooperation with a fishermen's association (MZP, 2021).

4.4 Germany

In Germany, the Federal Nature Conservation Act (BNatSchG) and the Federal Species Protection Ordinance (BArtSchV) are the main instruments of wildlife trade regulation. Enforcement presents a particular case given the federal structure of Germany. The Federal Agency for Nature Conservation (BfN) is the central enforcement authority on the national level, mandated to oversee all authorisations relating to the import and export of protected specimens, and responsible for the management of confiscated wildlife. Federal state authorities share some responsibilities on dealing with wildlife and trade, including monitoring and the prosecution of violations. The responsible structures vary from federal state to federal state. In total, there are 238 enforcement authorities within Germany (Gehrmeyer, 2021; Sina et al., 2016). The fragmentation of national enforcement approaches constitutes a major challenge for seizure management. Data is often not centralised nor collected uniformly across the federal states and some authorities do not have the appropriate tools to even do so (TRAFFIC, 2023).

Standard practices for short-term management and the temporary placement of seized wildlife differ from authority to authority (P#18; P#26). Management options cited in legislation include the in custody taking of wildlife by customs authorities, entrusting the specimen to a third party or leaving it in the possession of the owner under prohibition of further disposal. At the airport Frankfurt, which has the highest wildlife seizure records in Germany, seized live animals are brought first to the animal lounge, a private service company which facilitates the transport of live animals, as they also have quarantine facilities on-site (Hessisches Landeslabor, n.d.; P#18). The placement there is generally followed by a transfer to a nearby rescue centre or zoo. Other airports meanwhile place seized wildlife directly in zoos or facilities with quarantine facilities. Placement can however pose significant challenges as rescue centres and zoos are often overloaded and quarantine facilities remain rare. Animals may thus also be placed with private breeders, but this is mostly seen as a last resort, as is the placement of animals with the owner (P#16-19; P#22-25).

> It has always been the question of finding a suitable final home for the animal, in order to even go through with the seizure. In many cases it also plays into the decision-making because, after all, what shall the authorities do if they do not manage to find a placement for it after seizing it? (P#23)

It's the most common reason why seizures do not work out. Because there is a lack of placement options. The demand surpasses the available places by a large margin unfortunately (P#22).

Dead wildlife are often temporarily stored in customs storage facilities or in facilities that provide expert consultations, in museums and research institutions. 'Fortunately, more products get confiscated than live animals. It would be harder if more live animals were confiscated. Products can just be put on the shelf' (P#16). It is important to note that under BNatSchG (2009), it is stipulated that the owner has to bear the costs for seizure management. To what extent this is enforced is however unclear. According to some key informants, customs authorities rarely request cost reimbursements for the management of dead wildlife (P#16-18). With regard to live animals, when brought to zoos or rescue centres for temporary placement, the costs are in some cases reimbursed. Experiences varied however, with some facilities issuing invoices for caretaking provided, while other facilities mentioned that authorities provide no financial support (P#19; P#22-23).

When wildlife is confiscated, the responsibility for management is transferred to the BfN or to the federal authorities of the state concerned. Post-confiscation management is not prescribed by legislation. In practice, live animals are almost always placed in captivity, preferably in scientifically managed zoos. There are no state-organised facilities and the authorities are therefore dependent on zoos. According to Germany's latest implementation report

(BfN, 2021), the majority of confiscated animals were either returned to the country of export or placed in public zoos, designated rescue centres or approved private facilities. In particular, with very rare species, zoos are prepared to take them in to see if they could not be included in a breeding programme (P#18-19; P#25).

Some success stories have thus been recorded, for example in the case of confiscated lizards and tortoises that had been smuggled into Germany from the Philippines, and were rehabilitated in Cologne Zoo, where they were able to reproduce successfully (Koelner Zoo n.d.; Hauser, 2023; P#24). Finding a permanent home can be difficult as many zoos, rescue centres and sanctuaries are already full and do not have the capacity to take in more wildlife. Authorities may therefore also contact private breeders or facilities abroad. But as several informants noted, animals are at times kept for too long in temporary shelters under conditions that are not adequate for long-term care (P#18-19; P#25). Euthanasia is not considered a management option.

Dead wildlife, parts and derivatives are generally stored or redistributed between facilities for research, education or training purposes. For some wildlife, immediate destruction is practised for health and biosecurity reasons, particularly when food such as bushmeat is involved. With regard to redistribution, in the event of transfer, the BfN or the federal authority concerned retains ownership of the specimen for five years. The loan is recorded in a contract, together with the purpose of the loan. During this period, the specimen may not be redistributed or used for any other purpose. It is only after five years on loan that the specimens become part of the facility's exhibition reservoirs (P#20). This can be especially frustrating for museums, which are also not allowed to exhibit the specimens during this period, as it is strictly forbidden to make any commercial profit from the wildlife. Other issues raised in relation to storage included the lack of adequate, available and secure facilities. Many storage facilities do not have the necessary conditions to prevent damage to stored wildlife, nor are specimens kept and recorded to standards that would allow quick location (P#15; P#20-21; P#25).

Repatriation is generally not seen as a viable management option and no records are kept as it happens too rarely (P#15-25). On one occasion, repatriation was initiated following the seizure of Karo turtle eggs, a highly endangered species. Frankfurt Zoo managed to hatch them and, as the turtles are highly endemic to a small area, and on the initiative of one biologist in particular, the turtles were repatriated and reintroduced into their original habitat (P#18-19). Key informants noted that often only seizures of critically endangered or highly endemic species are communicated to the country of origin, when identified. However, here too, contacts are often lacking and it is not always clear who best to contact (P#16-18). Practical challenges were stressed, such as difficulties to ascertain the provenance of wildlife, the suitability of the animals to be released and funding. Interest in repatriation by other countries has been registered only regarding live animals (P#12-13). For dead wildlife and derivatives, repatriation was denounced as serving no purpose unless the wildlife is of cultural importance (P#15; P#20).

> The first question would be, if the country of origin has any sensible purpose for this animal or any sensible placement facility. If the animals would just end up being thrown into a bush somewhere, then this would not constitute any useful contribution to species preservation. That would not be a good deed, even though it might appear so on the first glance. Repatriation can be the best option in certain circumstances but it is often not the best option (P#19).

A number of challenges and areas of tension were also raised in relation to species identification and available forensic analysis capacities (BfN, 2021). It was noted that customs authorities often are assumed to have the expertise to be able to identify protected wildlife species, with any shortcomings seen as a criticism and limiting the opportunity for further specialist training (P#18; P#21). Another limiting factor often cited was the cost of forensic analysis or even consultation, in particular when more than one type of wildlife is apprehended (P#15; P#20-21; P#25). 'I said that I cannot do this species identification and that another expert would be needed. So, they just left it there. It would have been too much, in reality they just can't do everything' (P#15). In most cases, it is dependent on the individual networks of the authorities themselves which experts are consulted. A general lack of experts and forensic laboratories available to provide expert advice on wildlife has been noted, with some species not even being able to be identified (P#15; P#18-21; P#26). As several informants pointed out, the central database provided by the BfN to help authorities find a suitable expert for species identification is not up to date and therefore, to some extent, obsolete.

5 Discussion

The management of seized and confiscated wildlife is as can be seen nuanced and links to many factors. In order to deliberate on the present state and barriers to efficient implementation, it is necessary to understand the legal and administrative framework underpinning national practices and the specific context in which such practices are implemented. Since seizure management is primarily a national enforcement issue and very much embedded in situational contexts, comparisons are useful only to some degree for a better understanding of wildlife crime responses. Differences are visible in relation to seizure recovery, regulatory frameworks, the actor landscape and management options provided, as well as implementation. As foremost a source and transit region, seizure recoveries are often not only related to border management in East Africa, but also to poaching incidents, while Central Europe as foremost a transit and destination region, is rather concerned with border management and wildlife ownership. The emphasis placed thus differs as much to the context in which the activities are conducted but also to the wildlife itself. But parallels are also visible, in the case of Central Europe and East Africa, accountability and transparency in wildlife seizure and confiscation management remain an issue, as low prioritisation, resource allocation and

infrastructure remain wanting, and international cooperation mechanisms continue to operate in a disjointed manner. While regional cooperation initiatives have strengthened joint international enforcement and communication on IWT, collaboration on seizure management remains weak, with some success registered in East Africa with regard to developing best practices and forensic analysis, and in Central Europe, with regard to finding an appropriate home for seized live animals. Recent studies have begun to disentangle the processes of commodification, victimisation and exploitation inherent to IWT (Nurse and Wyatt, 2020). Yet, as made visible by the results, in exploring these kinds of social processes, it becomes clear very quickly that commodification arguably remains a central aspect in the handling of wildlife also upon and following confiscation as its value properties become renegotiated. Value is not necessarily monetary, even though it represents the most common form of valuation with far-reaching consequences also on other forms of value (Castree, 2003). The commodity value, similar to conservation value, is constructed, among other things, in relation to the animal species themselves, which in turn also has its bearing on management. Animals are valued by humans in very disparate ways with attractive species on the verge of extinction often placed at the top (White, 2011). The language and selectiveness behind seizure management can in some instances cast doubt on the claim that wildlife are fully decommodified once they are confiscated. While confiscated wildlife may generally not be traded as commodities any longer, their management remains often connected to the notion of (commodity) value or even to economic cost-benefit analyses.

When it comes to the management of dead specimens, Central Europe seems to place a value on repurposing confiscated specimens for education, research or training purposes. As many informants have pointed out in this regard, even if the specimen cannot be brought back to life, there is a reparative value in using them to train law enforcement and raise awareness on the harms of wildlife crime. At the same time, from the responses and constant references to valuation made, it is clear that the commodification process has not halted with the seizure of wildlife. In fact, a kind of schizophrenia prevails when talking about dead wildlife, as on one hand, authorities are adamant about dead specimens having "no value", with measures taken to negate their black market price and to prevent their laundering back into the illicit market, while, on the other hand, management options are often contingent on the relative "value" the specimens in questions have, with certain specimens being prioritised and even in the case of the Czech Republic, price estimations made. This dissonance is even more visible with regard to East Africa, where the management of dead specimens, in particular trophies, is the central focus of attention when dealing with seizure management, with management options often halting at the value attributed to the wildlife.

Overall, transparency and accountability in seizure management needs to be improved in both regions. The lack of adequate infrastructure and shortcoming to available resources have been raised by all countries respectively, with many pointing to the repercussions these have with regard to animal welfare, and meeting conservation and security needs. Indeed, as seizure management is not prioritised, management of confiscated wildlife often falls back to pragmatism and choosing the most appropriate option under constraints. Seizures, in particular of live animals, may not even be conducted out of fear that no appropriate management can be provided. While some innovative solutions have been found to cope with certain shortcomings, it is clear that more needs to be done if management is to be effective. Likewise, it is evident that in many cases it is also a question of case-specific and situated measures, as one-size-fits-all solutions can have their drawbacks. On the other hand, the lack of uniformity in enforcement responses also has its shortcomings and thus interagency and international cooperation is essential to overcome silos.

While all the countries have frameworks to guide at least part of the seizure and confiscation process, gaps were nevertheless to be found in all of them. Indeed, even though Europe is often hailed as having more developed structures and regulations in place, guidelines, whether in form of regulations or SOPs, for how to manage specimens once confiscated were glaringly missing. In contrast, the Uganda Wildlife Act provided a rather detailed framework and contingency planning for different stages ranging from the seizure of wildlife through to its management post-confiscation. But as evident from all the data, there is no need to develop further frameworks and streamline measures when the basic infrastructure is missing as the best meaning frameworks are of no use when they cannot be operationalised. 'If you're not giving the resources to do confiscations, then there's no use in a confiscation strategy. It just doesn't have any impact at all' (P#7). Or, put even more bluntly, 'No amount of new international law will change the fact that this store is crap' (P#29).

5.1 Repatriation put into perspective

In general, repatriation is not practised by any of the countries examined. As a management option, it is only mentioned explicitly in the frameworks of Germany, the EU and partially, the Lusaka Agreement. Even so, what has become apparent is that even for the actors involved, there seems to be minimal awareness of any efforts or demands made in this regard. Repatriation is not considered a practicable option by most, even though the emphasis placed by the different regions differs to some extent. Commonly raised was the fact that cases for which repatriation would be viable are rare in themselves. Records of repatriations are therefore also not kept, which hinders further understanding of the matter.

One major barrier hindering repatriation that was consistently raised was the difficulty to establish the provenance of seized wildlife. This was raised as much on the international level by the experts consulted, as on the national level across all case studies respectively. Forensic analysis is not standardised and resources and capacities to do so are not always given. This has been identified as a major limitation in East Africa, as it impedes crime scene management and above all, the prosecution of wildlife crime. Available capacities to conduct such analyses are limited, with

centralised operating laboratories overstretched or missing. Even for non-DNA analysis, experts are not necessarily readily available for species identification. Similarly, in Central Europe, capacity and resource issues have also been raised, with the cost of analysis often being prohibitive to analyse all wildlife seized. Depending on the wildlife seized, few experts may be available. Even when resources are available, it was raised that the information on service providers is often not centralised or up-to-date for enforcement authorities to easily identify whom to contact. As a result, species identification often falls back to individual contacts and relies in most cases to morphological identification, with phyloforensic analysis left to particularly "valuable" cases.

Resources were also commonly raised as impeding countries to even attempt repatriation, although some key informants also mentioned that repatriation requests were denied due to fear of costs in the confiscating country. This seems to indicate that the understanding of the procedures surrounding international repatriation may be in some cases limited, since exporting countries are in principle not obliged to pay. Unwillingness to pay thus certainly figures as a main barrier, although as can be seen in the case of Kenya, repatriation may still falter even if the country requesting repatriation is willing to pay and has put everything in place for transport. Commonly raised in relation to resources was also the value of the animal in question. Repatriation was generally not deemed as interesting or viable for all animals and many therefore underlined the need to conduct such processes only for wildlife species of high (conservation) value. Indeed, particularly key informants in Germany and Czech Republic dismissed the idea of repatriation for all but the most endangered species. While most informants raised animal welfare as well as conservation concerns in relation to repatriation, the latter was perceived as the more pressing and excluding therefore many animals from being considered for repatriation.

Many also raised in this regard their doubts about the source country being able to provide adequate care to the wildlife, if repatriated. Indeed, the lack of trust toward source countries was echoed by many informants in Germany and Czech Republic, sometimes in relation to the lack of available facilities, and other times, in relation to the lack of trust that these specimens will not be laundered back into the illicit wildlife market once repatriated. The lack of good relations and trust was also highlighted by the interviewees in East Africa. While corruption was also perceived as a problem in ensuring orderly repatriation, some also expressed their doubts if the confiscating countries were not keeping the wildlife for their own interests. Unwillingness to repatriate was therefore perceived as the bigger challenge, even when frameworks to cooperate internationally are in place.

While several key informants and consulted experts made reference to the need of established mechanisms to facilitate international cooperation, a point also highlighted by Liu (2023) and de Vries and Anderson (2022), when questioned specifically about Kenya and Uganda, interviewees generally concurred that mechanisms are in place. International communication and cooperation on repatriation should in theory therefore be possible. The fact that in practice this is not the case therefore suggests that other factors are more salient. Finally, individual championing was highlighted as essential for repatriation but also for seizure management overall to work. Since repatriation is not considered a viable management option per se, with many countries not automatically communicating on seizures, any effort committed to go this "extra mile", therefore, goes back to individuals pushing for repatriation to happen.

> Individual decision-making is probably more powerful than any process. Because a lot of the countries you're dealing with in the illegal wildlife trade do not have that level of resources to deal with these things in a process. They tend to be done by subjective decision-making (P#7).

6 Limitations and paths forward

While the study was from the beginning led by practitioners' perspectives, it unfortunately also set clear limitations on how far this study could research given realities and underlying dynamics. The need to trace wildlife post-confiscation management already from the point of seizure, an important distinction that remains invisible in the general treatment of wildlife law enforcement, meant that the centre of attention shifted forward placing the emphasis on management practices and challenges rather than revolving around a profounder treatment of repatriation. This was further reinforced by the many barriers to information and access, which surround this area of study. Repatriation remains rare, with many actors in positions relevant to such undertaking either not being informed or not willing to share too many details on the process itself. The former was particularly noticeable and suggests short institutional memory and lack of transparency, which, after all, seems to pervade all aspects related to wildlife seizure management. Consequently, this study deliberated in the end mostly conceptually on repatriation and further research is necessary to unravel the many dimensions and complexities of this particular criminal justice response.

Data representativeness remains another important limitation. While the utmost was tried to complement any data gaps and shortages in interviews, with information obtained from written correspondences, this variability of data collected and also of data sources needs to be acknowledged for each country study. There is also a limitation with regard to the national and regional aggregation of findings. First, while seizure management remains a national enforcement issue, the implementation remains in many cases fragmented due to the number of enforcement authorities involved, the site of seizure or simply, given by territorial fragmentation (as for instance in Germany, where enforcement is also a matter of federal states). Any conclusions on implementation on a national level are therefore limited in their representativeness. Secondly, given the nature of wildlife crime and increasing regional cooperation on this matter, it is necessary to examine regional

experiences. Nevertheless, for a more comprehensive regional overview all countries in the region should be included for further study as experiences may differ substantially. A case in point is East Africa, where even SOPs were developed together between Kenya and Uganda for exhibit management but which have entirely opposing policies as to the management of trophies.

As illustrated, seizure management represents a unique field of research that is rich in information, tension points and inconsistencies. The research objective was to collect insights into seizure management practices on the ground, taking into account extant enforcement and conservation needs, the efficiency of applied mechanisms, the barriers encountered in their use and resulting opportunities and implications. By laying this much-needed groundwork for understanding seizure management in practice, opportunities to build on this work to investigate more substantive questions around conservation, environmental and restorative justice are created. Furthermore, the characteristics of how and whether (de)commodification comes into play in the management of seized and confiscated wildlife vary and therefore deserve to be studied in greater detail. It is however clear that substantial changes need to be put in motion in order to ensure that wildlife seizure and confiscation management operates effectively as a criminal and environmental justice response to IWT, and does not in fact add to the violence and injustices committed against wildlife.

> It is important to consider both the potential benefits and ethical considerations associated with each approach. There are always concerns about these [wildlife] ending up back in the illegal markets. Any use of confiscated wildlife should [yet] be carefully evaluated to ensure that it aligns with conservation goals (P#30).

Data availability statement

Generated datasets include interviews which have been collected confidentially. According to the participant agreement sheet, they cannot be shared with third parties. Requests to access the datasets should be directed to annaxsaito@gmail.com.

Ethics statement

Ethical approval for the studies involving humans was not required by the Department of Social Sciences of the University of Hamburg. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

AS: Writing – original draft, Writing – review & editing.

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Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fcosc.2024.1489314/full#supplementary-material

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