"Embracing Innovation to Conserve the World's Animal Kingdom."

Trophy Hunting Team
Seacole building
2 Marsham Street
London
SW1P 4DF

12 December 2019

Dear Trophy Hunting Team,

"Consultation on controls on the import and export of hunting trophies"* and *"Call for evidence on the scale and impacts of the import and export of hunting trophies"

Please find International Wildlife Bond's (IWB's) response to the Department for Environment, Food & Rural Affairs (DEFRA) "*Consultation on controls on the import and export of hunting trophies – November 2019*" and "*Call for evidence on the scale and impacts of the import and export of hunting trophies – November 2019."*

For clarity the following answers are given to the initial consultation questions:

A1. Stephen Alan Wiggins
A2. stephenawiggins@iwbond.org
A3. International Wildlife Bond (IWB), Registered Charity No. 1164833
A4. IWB's response is 'not confidential'

IWB's response to the remainder consultations questions and call for evidence are given in the attached submission (via e-mail to huntingtrophyconsultation@defra.gov.uk).

Yours sincerely,

Stephen Alan Wiggins

Founder of International Wildlife Bond (IWB)

"Embracing Innovation to Conserve the World's Animal Kingdom."

"*Consultation on controls on the import and export of hunting trophies*" and "*Call for evidence on the scale and impacts of the import and export of hunting trophies*"

Table of Contents

1 Introduction

Before answering the questions posed in the DEFRA guidance, there are some overview issues outlined within this introduction section.

It has been made clear in supporting Department for Environment, Food and Rural Affairs (DEFRA) guidance (DEFRA, November 2019, paragraph 54.) that any trophy importation/exportation restrictions (as proposed by the United Kingdom (UK)) do not in themselves 'ban' trophy hunting.

The internal decision on whether any given country that hosts trophy hunting chooses of its own free will to issue hunting quotas is independent of any external country (such as the UK) permitting imports of such hunting trophies.

The question is, where such hunting quotas exist, are these quotas based upon recognisable science (independent, impartial, verifiable, peer reviewed etc.), plus weighed against the moral and ethical arguments (and how these impinge upon any given country's international reputation).

The Congressional Research Service (2019) (page 12) found that "*Numerous factors affect a species, and teasing out the effects of trophy hunting is challenging due to a lack of long-term monitoring of hunted populations*" (Seilier et al. 2015) – which suggests that the monitoring of hunted populations is sporadic at best, hence the pro-hunting claims that the hunting attrition is a panacea (which always delivers conservation benefits) lacks credibility.

In addition, where such hunting quotas exist, what level of corruption and deceit is at play to circumvent international laws to obtain hunting trophies and the wildlife commodities encompassed within a given trophy – be that raw, processed, or manufactured product?

Regardless of any positive outcomes/consequences (to be determined) stemming from trophy hunting in terms of claimed conservation benefit, does the ends justify the means?

The UK's role may not be overwhelming as DEFRA (DEFRA, November 2019, paragraph 37.) has stated - "*in 2017, fewer than 100 hunting trophies entered the UK…..the number of exports are very low….*" However, this does not mean there could not be a spike in such imports/exports to and from the UK to exploit any loopholes left within the UK's system.

Regardless, when it comes to endangered species, every life is precious, so trophy hunting attrition should be above reproach, not excused because of the theory that "***if***" well-regulated it "***could***" have positive outcomes.

In reality, trophy hunting is often (see evidence at Paragraph 1.1 and 3.7.1) not well-regulated, with the hunting industry vulnerable to corrupting influences, slow to acknowledge systemic issues, resistant to criticism and slow to make positive changes (if ever). Many of trophy hunting's practices hail form a bygone era, but such 'traditions' are no excuse to perpetuate the trophy hunting industry's harmful practices.

The push (such as the UK Ivory Bill (2018)) to curtail the poachers' attrition of endangered wildlife is commendable, but allowing the very same members of a species saved from poaching, only to be 'legally' trophy hunted smacks of hypocrisy. It can be argued that poachers seek subsistence income to bring back to their community. So, arguing trophy hunting is somehow justifiable in comparison because some communities perhaps benefit from the subsistence of trophy hunting's trickle-down economics is not valid – especially when the attrition of the trophy hunter is not based on recognisable science as contributing anything to conservation (be that habitat protection, and/or proven human wildlife conflict mitigation).

1.1 Poorly Regulated Trophy Hunting

The aim in this section is to just highlight some of the bad, poorly regulated trophy hunting practices that have been allowed to persist.

1.1.1 Pseudo Hunting

'Pseudo hunting' is used under the guise of trophy hunting to obtain wildlife commodities (such as rhino horn, but extends to ivory from elephants, hippopotamus (ivory) and other species, such as lions for their skeletons to supply the lion bone trade etc.) by deception, by exploiting the leeway given to 'legal' trophy hunting.

> "*'Pseudo-hunting' is the practice whereby supposed trophy hunters either need to be told how to shoot or leave the actual shooting to an accompanying Professional Hunter or land owner, a practice that is illegal in South Africa*" – Endangered Wildlife Trust

It should be borne in mind that anyone can declare themselves a trophy hunter and 'legally' kill a target animal with the intention of obtaining certain body parts for commercial gain (not for the sole pleasure (sic) of obtaining a hunting trophy per se.).

The past trophy hunting of rhinoceros has not always been above ethical reproach, because it has been used as a mask to obtain rhino horn by deception, via pseudo-hunting (United Nations Office on Drugs and Crime 2016, Africa Geographic 2013):

> For example (Harvey 2018) - "*A Vietnamese businessman who has 'used CITES trophy hunting permit loopholes to export rhino horn for trade. He was arrested in Limpopo in 2011 and found guilty…..*" - EMS Foundation & Ban Animal Trading, 2018, page 70

In 2006, the number of trophy hunted rhino in South Africa was 58 trophies and in 2005, 73 were exported. A total of 268 rhino horns were exported between 2006 and 2009. These figures are however suspect because between 2005 and 2007 Vietnamese 'trophy hunters' participated in 203 white rhino hunts, and this would have yielded at least 406 rhino horns (Ginkel 2016).

So, trophy hunting of rhino can be used to supply the "*illegal trade in rhinoceros products*" which Namibia's own submission to Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 18th Conference of the Parties (CoP18) states *"constitute the greatest threat to this species."*

It takes the hunting industry (under outside pressure) a long time to recognise and attempt to address such abuse and deceptions:

> *"….. experience from rising exports of rhino horn as hunting trophies from so called "pseudo hunts" in South Africa has shown that it can take seven years (2003-2009) to recognise and address such problems*" - Mass et al. 2016

There is no reason why given the right commodity price incentives, 'legal' trophy hunting of elephants, rhino, lions, hippopotamus etc. cannot continue to be abused to obtain wildlife commodities for commercial gain.

1.1.2 Pseudo Trophies and Fraudulent Exploitation

There is little thought given to how many, or the potential for how many seemingly 'innocent' hunting trophy imports (and/or subsequent exports) open the UK system up to fraudulent exploitation and abuse to circumvent hunting trophy import restrictions beyond the UK's borders; feeding illicit activity, for example:

> "*The UK representative [Adrian Sailor, an amateur taxidermist in the West Midlands UK] of a South African safari company [Settlers Safaris] advised an undercover investigator how he could bypass a US ban on importing captive-bred lion trophies by legally importing it to the UK, before hiding the lion's skin inside that of a dead red deer and moving it on to America*" – "*Horror of lion farms exposed: Year-long investigation reveals sickening trade and ends with a dramatic rescue*," The Daily Mail, 27 April 2019

> "*During the search, officers noted a Western Screech Owl which had also been offered for sale. At the time the officers did not have any major concerns about that specimen, because it was not listed on Annex A and did not require an Article 10 Certificate. However, there are strict export restrictions on the species, which meant export permits were required if it was ever exported outside the EU. A few days after the search, officers noticed on Ebay that the sale of the Screech Owl had been completed and it had been exported to a man in Connecticut, USA. Despite the fact that Mr. Yafano [the vendor] was well versed in the legal requirements to export such species, there was no record him applying for an export permit. Officers contacted their colleagues in the US Fish and Wildlife Service, who visited the buyer in Connecticut. Agents from the USFWS made a significant seizure of around 150 illegally held taxidermy, including the Screech Owl*" - "*Taxidermist guilty of fraud and illegal trade in endangered species*," National Wildlife Crime Unit (NWCU), 25 September 2019

1.1.3 'Science' Funded by Pro-trophy Hunting Influences

On 30 August 2019, 'Science' magazine (the journal of the American Association for the Advancement of Science (AAAS)) published an 'Open Letter' titled "*Trophy hunting bans imperil biodiversity,"* (Dickman et al. 2019) - also reference the BBC News' initial article, "*Scientists: Banning trophy hunting 'doesn't protect animals'*," 30 August 2019.

However, this 'Open Letter' has been openly criticised for being incomplete and failing to consider ethical values (plus the initial lack of the authors' declaration of the Open Letter's ties to pro-hunting funding for elements of their research).

"*Trophy hunting: Values inform policy,"* (Batavia et al. 2019) makes the point that Dickman et al. contend such bans would "*imperil biodiversity.*" However, Dickman et al.'s evidence is "*selective and does not directly support the contention that [hunting trophy] import bans yield negative conservation outcomes*."

Critics of trophy hunting suggest that trophy hunting concessions (land) do not ensure that threatened or endangered animal populations will rebound from low levels (Loveridge et al. 2006), or that such hunting concessions encourage natural biodiversity – "s*ome rangeland managers artificially alter the ecosystem by introducing exotic species or manually reducing predators of trophy animals*" - Congressional Research Service (2019) (page 16)

Harvey (2019) argues that "*The letter [Dickman et al. 2019] goes on to argue that "ending trophy hunting risks land conversion and biodiversity loss*." *Not ending trophy hunting carries similar risks. Shooting the elephants with the biggest tusks, for instance, means shooting the most reproductively successful animals who also play a crucial role in maintaining ecosystem functionality and herd sociology.*

Shooting the lions with the biggest manes similarly undermines pride functionality. In both instances, the genetic selection effects are pronounced and problematic for biodiversity loss."

Furthermore, Batavia et al. 2019 make clear that any pro-hunting advocates that espouse policy being "*based on science, not feelings of "repugnance""* establishes another dichotomy. Batavia et al. 2019 contend that policy *"requires both understanding the likely results of a policy (science) and evaluating whether those results are desirable (values)*" - ie. where such "*values*" must be weighed against current moral and ethical norms, not the assumption that morals and ethics are to be somehow disregarded when it comes to trophy hunting – trophy hunting's self-exemption from morals and ethics is not a given:

> *".....if a few animals are shot because a few wealthy people can afford to shoot them, and this ensures (speculatively) that the land is not converted to agriculture or other non-wildlife uses, then it is morally acceptable to allow trophy hunting.*
>
> *But this backdoor appeal to consequentialism assumes that outcomes would be worse in the absence of hunting and ignores the importance of respect for individual animals*

> *(and the fact that removing the most impressive individuals has deleterious ecosystem and population-level impacts)"* - Harvey 2019

Therefore, it is important to review the available science in the round, trying to avoid the confirmatory bias (just looking for evidence to support one's own pre-judgement of an issue/argument), or be lulled into accepting published, credible science when some of the scientists in question have funding links to one side of a given issue/argument.

1.1.4 Hunting Quotas are not Based on Independent Verifiable Science

Any UK hunting trophy importation/exportation restriction decisions need to be taken in the full light of reality of what trophy hunting actually represents on the ground.

For example, looking at the specific subject of lion trophy hunting, ("*Are lion trophy hunting quotas based on science?*" International Wildlife Bond (IWB), 17 December 2015), the setting of hunting quotas is clearly based upon often outdated and inaccurate data – but data that supports the continuation of hunting quotas regardless. The motivation would appear to be to maintain the income model, with actual science to support a conservation imperative somewhere in the background (if at all).

Other examples are given at paragraph 3.7.3.3 - where a leopard census based on poor science was orchestrated to support the (pre-meditated) theory 'there are still plenty left to kill.'

1.1.5 Genetic Effects of Trophy Hunting

Trophy hunting can also have a significant effect on the genetic makeup of a targeted population, if the population is small or if hunting is prolific and focused on individuals with specific traits (e.g. large tusks, horns or antlers):

> "*Trophy hunting of individuals in small populations could reduce the population's gene pool and increase the chance of inbreeding and breeding by less vigorous males; if too many males are removed from the population by hunting, there is less fighting to establish dominance and breeding rights among males, which can allow less vigorous*

> *males to breed. Inbreeding and a reduced gene pool can affect the population's viability and can cause extinction*" - Congressional Research Service (2019) (page 14)

If trophy hunting, for example, focuses on larger, breeding males, there would be fewer males to mate and the population could suffer from low reproductive rates (Milner et al. 2007). This is clearly evident in lion trophy hunting, where larger males with impressive manes are prized trophy hunting targets, which can also lead to population decline if too many male lions are trophy hunted, as females then have a limited pool of males to mate with and maintain reproductive rates (Whitman et al. 2004).

This opinion is also concurred by Knell et al. 2017:

> "*we asked the question of how this might change when those highest-quality males are removed by "*selective harvest*." It's prohibitively difficult to test these ideas with real hunted populations, so we developed a computer simulation which allowed us to examine what happens when you take these animals out of a population.*
>
> *Our results are clear - and worrying. If the environment is relatively stable, then even quite severe harvesting of high-quality males is sustainable. But if the population is already stressed by a changing environment, then removing even a small percentage of the best males can lead to extinction…..The trouble is, almost all animal populations today are facing increasing stress from changing environments.*
>
> *This goes against the conventional wisdom. Since there is usually little paternal care of offspring in these animals - and because it seems reasonable to assume that females will not have problems getting fertilised if we remove, say, 15% of the males - it is usually assumed that trophy hunting and similar selective harvests are unlikely to drive animals to extinction when only a small proportion of males are hunted. Our results suggest otherwise."*

1.1.6 Infanticide and Conflict

Trophy hunting can disrupt the social makeup of a population (or pride) if the species is social, such as African lions (Panthera leo). If a dominant male lion is killed, males in the region fight to gain control of the vacated territory, but in order to improve its reproductive success, an incoming male might kill the offspring of the former rival male (Lindsey et al. 2006, Caro et al.

2009). Pride females need to hunt, so they have to leave their cubs unattended – this is when an incoming male can strike. But such action does not endanger the incoming male's chances of reproducing with the pride females, even if he did kill their previous cubs – the incoming male can be a "*murderer turned family man*" in lion pride dynamics (Loveridge 2018).

The fighting amongst male lions trying to take over and dominate any pride, can lead to injuries, death and disruption, with far reaching effects for lion sub-population stability. If this practice occurs frequently (due to regular trophy hunting attrition), a given lion sub-population's viability could suffer from lower growth rates and diminished reproduction. It has been estimated that the trophy hunting of one pride male can lead to up to 20 additional lion deaths as the consequence ripple out. The taking of a key female lion, the pride's hunting expeditions leader, can lead to a vacuum thus diminishing the chances of the pride successfully hunting and feeding itself.

So, the taking of 'one lion' as a hunting trophy can have wide spread, negative impacts on lion dynamics and positive species' population growth. The taking of multiple lions from a sub-population on a regular basis can be devastating – it's potentially more than 'just one lion' any given trophy hunter is removing from the species' survival.

1.1.7 Cover-ups

The hunting industry lacks transparency. When the hunting industry is questioned over its policy claims and actions in reality, there is often a lack of a credible response - denial and deflection are the industry's usual fall-back.

For example, controversial lion hunts abound, from Zimbabwe to South Africa.

In 2017, a WildCRU study lion, Xanda (a pride male and son of Cecil), was targeted by trophy hunters – the lion was lured from the protection of Hwange National Park in controversial circumstances ("*Xanda - who is not telling the truth?*").

On the 14 August 2019, another male lion (11 years old) Seduli was lured from the protection of Hwange National Park, Zimbabwe to be executed for a hunter's trophy needs. Seduli was in a coalition with another male lion, Mopane, with both lions frequently seen by photographic safari lodges in and around Hwange National Park, Zimbabwe - how does luring a healthy male lion to its death from a photographic tourism area support the hunters' claims

that their 'sport' conserves lion habitat not suitable for photographic tourism? There has been no explanation why luring a healthy male lion to be killed in an empty hunting concession can be justified by pro-hunting advocates as 'conservation.'

In 2018, a lion named Skye was hunted in Umbabat on the border of Kruger National Park, South Africa (Cruise 2018, Pinnock 2018a) – Skye was baited and lured to his death on 7 June 2018 from the 'protection' of the Kruger National Park:

> "*Despite limitations, the practice of trophy hunting lions seems, too often, to targets males in their reproductive prime so that the hunter can get a better trophy. This can lead to elevated infanticide and reduced reproduction by the removal of too many adult males and this sadly leads to a rapid population decline*."

To this day, there has never been any official acknowledgement of the targeted lion's identity and why a permit was issued to kill a lion protected within the Kruger:

> "*Every attempt at obtaining full and transparent disclosure from the Umbabat Reserve and from the Mpumalanga authority (the Mpumalanga Tourism and Parks Agency) that issued the hunting permit have failed. This included: requests for information on the actual hunt itself; the people involved; visual sight and identification of the lion skin to ascertain which lion was hunted; and details of the permit (including a copy thereof)*" – Skye Report, 2018

The hunting industry lacks transparency and when questioned, tends to close ranks and seeks to cover-up, rather than any attempt to be open and extol the self-proclaimed virtues of its motivations/actions.

2 Consultation on controls on the import and export of hunting trophies

2.1 Question 5: "*Is there anything you would consider to be a hunting trophy that falls outside of the definition found in CITES and the EU Wildlife Trade Regulations [WTR]?*"

The actual definition of a hunting trophy as given in DEFRA's guidance is acceptable, namely "*a whole animal, or a readily recognisable part or derivative of an animal, specified on an accompany CITES permit or certificate, that:*

i. is raw, processed or manufactured;
ii. was legally obtained by the hunter through hunting for the hunter's personal use;
iii. is being imported, exported, or re-exported by or on behalf of the hunter, as part of the transfer from the country of origin, ultimately to the hunter's state of usual residence."

However, the problem with CITES' definitions as used to record 'Trophies' in the first place is that that they are vague and abused – hunting trophies can be categorised under CITES 'Trade Terms' as 'Bodies', 'Skulls' etc., with body parts divided between 'Bones,' 'Feet', 'Claws', 'Skins,' 'Tusks,' 'Teeth,' 'Tails' etc. – there are some 107 possible 'Trade Terms' in total, with entries for some 'Trade Terms' possible in various units. For example, 'Tusks' can be in integer units (ie. 2 tusks), but also kgs, or grams - but a weight could be one tusk, or multiple tusks; therefore is "90*kg*" of Tusk(s) one hunting trophy's tusk(s), or more than one elephant trophies' tusks (dividing by an average tusk weight only gives partial clarification)?

Therefore, it becomes virtually impossible to decipher from CITES trade database exactly how many specimens of a given species were actually killed for hunting trophies. The 'Trade Term' 'Trophies' is there and is used of course, but this category does not by any means define an exact total number of animals killed to obtain hunting trophies on CITES' trade database.

2.2 Question 6: "*Is there anything that falls within the definition used in CITES and the EU Wildlife Trade Regulations that you consider should not be treated as a hunting trophy?*"

No.

2.3 Question 7: "*Do you envisage any challenges or difficulties which might arise from using the definition in CITES and EU Wildlife Trade Regulations, for example, when it comes to enforcement?*"

The issues raised at paragraph 2.1 (the lack of clarity and misuse of CITES' terminology) extends further – as a hunting trophy can be given under many CITES 'Trade Terms.'

For example, is a leopard's skin (obtained via trophy hunting) a 'Skin,' or a 'Rug,' or 'Skin Pieces,' or a 'Leather Product,' or a 'Fur Product'? All these terms are used to describe potentially the same thing, even though the 'Trade Term' 'Rug' is not actually defined by CITES as a 'Trade Term', it is still used (reference paragraph 3.3.6.1 - Leopard (*Panthera pardus*) - Exports from the UK).

But the point is, if a leopard's skin was obtained via trophy hunting, then it is by definition also a hunting trophy and therefore enforcement of any restriction on import/export apply regardless of it being listed on CITES paperwork as anything other than 'Trophies' and/or the 'Purpose' of the transaction being 'Hunting' ('H'). Even If the 'Purpose' is 'Personal' ('P'), or 'Commercial' ('T'), the leopard skinned was trophy hunted. Of course, the get-out will be that there is no way to derive (unless 'Hunting' is declared) whether a given leopard's skin was via natural attrition/mortality – ie. 'Personal' gives no clue as to whether a leopard's skin was obtained from hunting, or not.

Therefore, the enforcement of any hunting trophy UK import/export restriction needs to consider the sheer variety of definitions (explicit, or otherwise) that define a hunting trophy when considering CITES definitions (and the abuses that are used to obfuscate).

The European Union (EU) Wildlife Trade Regulations (WTR) permit system addresses sport-hunted trophies directly and recently listed regulations for the import of polar bear, African elephant, and African lion trophies, among others.

However, member states of the EU can implement more stringent policies than the EU to address the trade of species. Therefore, the UK can implement its own, stricter definition of what constitutes a hunting trophy to include not only CITES 'Trophies' 'Trade Term,' but also 'Skin,' 'Rug,' 'Skin Pieces,' 'Leather Product,' 'Fur Product' etc. which can be used to obscure a hunting trophy.

In addition, the EU regulations, are potentially stricter than CITES regulations (the differences are summarised here). For example, some CITES Appendix II species are in Annex A under the EU, and Annex A contains stricter regulations for trade than CITES. Annex B species under the EU require both import and export permits, whereas similar CITES Appendix II species require only an export permit. The EU wildlife trade system also regulates trade within the EU. The EU system is in compliance with CITES, because CITES stipulates that parties can have laws and regulations that are stricter than CITES.

Then there is the issue of 'pseudo hunting' (reference paragraph 1.1.1) to obtain wildlife commodities – so despite a trade term of 'Trophies' and 'Purpose,' 'Hunting' (or some other 'Purpose') being given on any CITES paperwork, enforcement should caution against any leniency that permits the import/export of wildlife commodities – such as rhino horn, hippopotamus teeth (ivory), elephant tusks (ivory), crocodile skins, giraffe skins, lion bones, bear gall bladders (bear bile), pangolin scales etc., some of these latter wildlife commodities are in demand for Asian, traditional remedies/medicines.

The UK can be used as a transit hub for hunting trophies ('Skin,' 'Rug,' 'Skin Pieces,' 'Leather Product,' 'Fur Product', 'Teeth,' 'Tusks' etc.) and therefore, such hunting trophy transit incidents could potentially rise if enforcement allows loop-holes to be exploited – ie. if the UK's trophy hunting import/export restrictions do not encompass the full range of possible 'Trade Terms' used for hunting trophies and derivatives, this could open up opportunities for the potential means to illicitly obtain wildlife commodities derived from trophy hunting and transit them via the UK.

If the UK's trophy hunting import/export restrictions make a distinction between 'Wild' ('W'), 'Captive' ('C'), or 'Ranched' ('R') sourced trophies, then the actual CITES definitions and their potential misuse needs to be cautioned against in subsequent UK restriction enforcement – ie. if the UK restricts South African 'Captive' lion trophies, then accompanying CITES paperwork could be doctored to show 'Wild' sourced as a means to evade UK restrictions. Furthermore, such 'Captive' South African hunting trophies could be exported to another third-country for taxidermy, then re-exported with the source and the country of origin obscured to evade restrictions.

2.4 Question 8: *"We set out a number of options above. We would like to understand your preferred option and the reasons for that preference"*

a. Option one: A ban on hunting trophies from certain species entering or leaving the UK.

b. Option two: Stricter requirements for clear benefits to conservation and local communities to be demonstrated before hunting trophies from certain species are permitted to enter or leave the UK.

c. Option three: A ban on all hunting trophies entering or leaving the UK.

d. Option four: Do nothing - continue to apply current controls based on internationally agreed rules.

e. None: Please suggest any alternatives"

The preferred option is c., Option three, "***A ban on all hunting trophies entering or leaving the UK***."

The preferred option c., Option three is followed by a. Option one, "***A ban on hunting trophies from certain species entering or leaving the UK.***"

2.4.1 1st Preference - Option three - *"A ban on all hunting trophies entering or leaving the UK*"

The stated, first preference for Option three, "*A ban on all hunting trophies entering or leaving the UK*" is based upon the following principles:

1. Public sentiment on trophy hunting is moving towards deontology (ethics, reference paragraph 2.4.5, 2.4.8 and 2.4.9) rather than consequentialism and the claims made that trophy hunting's cruelty is somehow justified (reference paragraph 2.4.6 below):

A UK poll conducted by Survation (dated 24 July 2019), found that 86% of respondents expressed the view that "*Trophy hunting should be universally banned*.**"**

2. Trophy hunting's beneficial claims of conservation are overstated – reference paragraphs 3.7, 3.11 and 3.12;

3. Trophy hunting can be used as a deceitful means to obtain wildlife commodities – 'pseudo-hunting' (paragraph 1.1.1);

4. It is easier to implement all-encompassing restrictions than it is to fund and enforce, complex systems that leave scope for abuse (that must be policed, enforced and hence funded). The assumption is, that to fund a system that allows certain hunting trophies under certain circumstances invites attempts at deception – be that in originating paperwork in terms of a given specimen's true taxonomy, location the specimen originates from, whether the specimen is from a wild, or captive source etc., all such criteria can be abused to obfuscate and evade restrictions (Ammann 2015, EMS Foundation 2018).

2.4.2 2nd Preference - Option one, "*A ban on hunting trophies from certain species entering or leaving the UK*"

1. The suggested starting point for identifying which species should be considered for hunting trophy import/export bans is given at paragraph 2.5 (in answer to Question 9). The suggested criteria are stringent and encompasses many trophy hunted species, but not all – for example, the trophy hunting of monkeys and baboons would fall outside of CITES Appendix I and II listing and the IUCN Red List restrictions envisaged at paragraph 2.5. Targeted species include yellow baboons, chacma baboons and chlorocebus monkeys – are all listed as "*Least Concern*" on the IUCN Red List. It is estimated that "*494 primates – 383 baboons and 111 monkeys – were imported into the UK from the 1980s until 2017*" – The Independent 2019b. Hence, rather than allow trophy hunters to continue to import a hunting trophy from mankind's closely related species, Option three ("*A ban on all hunting trophies entering or leaving the UK*") is preferred as it would curtail such '*inhumane*' trophies being allowed to transit to and from the UK.

2. If a given species' overall population numbers is taken by DEFRA as the starting point for deciding which species should be subject to hunting trophy imports/exports leaving the UK, then such analysis also needs to consider sub-population levels, not just an overall species' population level – trophy hunting can deplete (and eliminate) a given species' sub-population. So just looking at headline species' population figures can be deceptive in terms of sub-population species' conservation:

> *"Scientists report that trophy hunting can affect a specific, localised population of a given species in many ways: by reducing the number of animals in the population, by reducing the population's reproductive capacity, and by altering the ecosystem where the species resides"* - House Committee on Natural Resources, 2016 – "*Missing the Mark – African trophy hunting fails to show consistent conservation benefits*"

For example, the EU's Scientific Review Group (SRG) re-expressed (September 2018) a "*Negative opinion for import of specimens*" from the Kane Basin subpopulation for Polar bears (*Ursus maritimus*) from Canada. Any UK species specific trophy import restrictions needs to also reflect any given species' sub-population issues if species conservation in the wider context is the imperative – which suggest a more rigorous case-by-case approach is required, encompassing element of Option one and Option two.

2.4.3 Option two - *"Stricter requirements for clear benefits to conservation and local communities to be demonstrated before hunting trophies from certain species are permitted to enter or leave the UK"*

The fear is that the Option two requires significant resources to analyse and assess:

1. Joint Nature Conservation Committee (JNCC) – the UK's Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Scientific Authority – needs to be resourced to assess on a case-by-case basis.

2. The proven conservation benefit of any given hunting trophy on a case-by-case basis could potentially encourage the gathering of any actual scientific evidence to support

a given trophy's contribution to the species' conservation (not just the reliance on 'well-regulated' trophy hunting theory). But it is feared that such evidence could be fabricated from the exporting range state to meet the purpose.

3. The only way the actual biological/conservation implications for a given trophy hunt can be analysed, is for the scientific authority in the country where the trophy hunt was sanctioned to provide clear, supporting scientific evidence. However, the fear is that such evidence is often lacking, there is little means for independent verification, or the 'evidence' is based upon poor, arbitrary data, and/or is subject to corrupting influences.

4. For example, killing a wild lion for a trophy from a population of 2,000 in a range state is one thing. Killing a lion for a hunting trophy from a sub-population of 40 in the same range sate is quite another – the latter is clearly going to have less likelihood of any conservation benefit for that minimal sub-population. The African lion is considered "*Vulnerable*" (IUCN Red List), so under Options one and three, a lion hunting trophy would potentially be restricted in entirety. But should Option two be favoured ("*Stricter requirements for clear benefits to conservation and local communities to be demonstrated before hunting trophies from certain species are permitted to enter or leave the UK*") then such sub-population nuances would need to be analysed somehow and taken into consideration regardless of any range states' credibility for setting sustainable hunting quotas.

The UK system for hunting trophy importation requires an import permit based upon assessment by the UK's JNCC. The JNCC makes an assessment to ascertain if a given hunting trophy has been legally obtained and if the hunting trophy passes 'sustainability criteria' "*to confirm that the trade will not be detrimental to the conservation of the species concerned*."

But reliance on CITES as the preceding authority on sustainability is misleading – CITES is not a conservation body and trophy hunting is given generous treatment by CITES when it comes to any notion of proven sustainability/conservation (reference paragraph 2.4.7, "*Trophy hunting is legal*").

Many conservationists have a great deal of concern about any implied reliance upon CITES itself, the 'science' used by source countries exporting hunting trophies and the credibility of the whole hunting ethos/theory of "*if*" well regulated, hunting somehow equates to

conservation. These claims often remain unscrutinised for any genuine conservation imperative – CITES and trophy hunting cloaked behind a banner of 'sustainable utilisation.'

There is no reason why the United Kingdom's JNCC cannot independently set its own sustainability/conservation criteria from any exporting nation's claims that its hunting quota is somehow above reproach (and not just based on sustaining income from hunting).

But in the absence of conclusive, independent, peer-reviewed scientific evidence and growing public sentiment, now is the time for the United Kingdom to make a stance and end the import of all hunting trophies.

2.4.4 Option four - *"Do nothing - continue to apply current controls based on internationally agreed rules"*

Of course, Option four, accepts the status quo and has been disregarded as unacceptable.

2.4.5 Deontology vs. Consequentialism

In moral philosophy, deontological ethics or deontology is the normative ethical theory that the morality of an action should be based on whether that action itself is right or wrong under a series of rules, rather than based on the consequences of the action.

The converse of deontology is consequentialism, where the latter is defined as the doctrine that the morality of an action is to be judged solely by its consequences.

I would suggest that the stated preference for Option three, "*A ban on all hunting trophies entering or leaving the UK*" is based upon deontology, because the benefits claimed by trophy hunting's consequentialism are often unfounded, or if being generous, remain open to question. However, the (immoral) cruelty inflicted by trophy hunting is beyond dispute:

> *"The second issue is the distress and suffering caused to individual animals by hunting. Hunted animals may show measurable indications of stress (Macdonald et al. 2000), starting at first awareness of the natural (Chabot et al. 1996) or human (Jeppesen 1987) predator. At some point during a successful hunt, the hunted animal fails to cope with events, and stress becomes distress"* - (Loveridge et al. 2006)

2.4.6 Trophy Hunting's Consequentialist Claims

Many pro-trophy hunting claims are based upon pure consequentialism, when the target animal often is executed (or "*harvested*" as hunters like to term it) in cruel and barbaric circumstances, using bows/arrows, guns/bullets.

Figure 1 - Trophy hunter with bow and arrows

To preserve the target animal for its future use as a trophy (ie. gracing a wall in the hunter's domain), a clean/quick head shot is avoided for fear it will leave the trophy's skull/head scarred (and show the trophy's means of execution). Therefore, the target animal is often wounded in other regions of its body, leading to a slower, more painful death (as demonstrated in July 2015, with the killing of Cecil the lion in Zimbabwe, by Walter Palmer using a bow and arrow).

The pro-hunting advocates also rely on trophy hunting being 'legal' within a given host nation, with the false correlation that just because something is 'legal,' then it is 'right' and beyond reproach. However, this historical defence/justification is not been beyond challenge – for example the past challenges made to 'legal' apartheid, or 'legal' slavery that ended such abhorrent embarrassments to humanity.

Just because something is 'legal' does not by default make it acceptable or right. The general public's ethics and morals are constantly evolving and within this context, trophy hunting

(regardless of its 'legality') is increasingly seen as a socially unacceptable past-time – deontology overriding pro-trophy hunting's consequentialist claims.

In the paper, "*Trophy hunting: Role of consequentialism,"* (Chapron et al. 2019) the authors make clear that traditional pro-trophy hunting advocates try to base their arguments upon evidence-based policy-making and give no credence to any moral-based policy-making.

However, pro-trophy hunting's arguments "*claiming that trophy hunting benefits imperilled species is significantly easier than finding evidence to substantiate it*" – House Committee on Natural Resources, 2016 – "*Missing the Mark – African trophy hunting fails to show consistent conservation benefits*

There has clearly been a shift in the public's perception (plenty of negative press), rejecting the acceptability of trophy hunting with today's raised awareness of nature and the negative impacts it faces – be that climate change, habitat loss etc.

Figure 2 - Negative UK trophy hunting press

Increasingly, trophy hunting is being viewed as a repugnant 'sport' from a bygone era whose attrition is morally unacceptable:

> "*Society is rapidly evolving towards adopting an equal relationship with the environment where humans and natural systems, including animals, are viewed as an inseparable entity and where exploitive and selfish behaviours that put fellow humans*

and animals at a disadvantage are shunned" – The Southern Africa Tourism Services Association (SATSA), 2019 - "*Evaluating Captive Wildlife Attractions & Activities*"

In the 2016 report, "*Report on Lion Conservation with Particular Respect to the Issue of Trophy Hunting,"* (Wildlife Conservation Research Unit (WildCRU), Macdonald, Professor David et al.) the conclusion was drawn that despite any consequentialism arguments found in support of lion trophy hunting, the report speculates (at Paragraph 5.1) that even if lion hunting is considered the 'best bad option' for habitat security, public opinion (based upon a notion of 'emotionally driven ethics' or otherwise) is increasingly averse to the on-going social acceptability of lion/wildlife trophy hunting, regardless of any faith in its potential adherence to regulatory mandates etc.

2.4.7 Trophy Hunting is 'Legal'

The challenge to the acceptance of 'legal' trophy hunting extends to the primary international body charged with overseeing the trade in hunting trophies – namely, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) where permits for trophy hunting of even highly endangered species is somehow deemed appropriate (CITES exempts trophy hunting from its provisions by classifying it as a "*non-commercial*" activity alongside scientific research, when trophy hunting is very much a commercial industry).

Trophy imports of CITES-listed species under Appendixes I and II generally are administered through a quota system established by the range country (or in some cases the CITES Secretariat - Article IV, paragraph 2(a) of CITES). However, there is a great deal of leniency given to trophy hunting which is not extended to trade in the same given species – eg. the trade in Appendix I species must only be authorised "*in exceptional circumstances*."

CITES' stance is seemingly based upon indifference to change, rather than any acknowledgment of the science that says trophy hunting practices can be detrimental (reference paragraph 3.7.3) to a given species' chances of survival in the wild.

However, it should not be overlooked that CITES is pro-trade body, not a conservation body (where such a conservation body is severely lacking on the international stage, but is represented by a fragmented array of pro-conservation Non-Government Organisations (NGOs), coalitions, advocates and concerned individuals):

> "*CITES deals with international trade, it is not there to deal with the conservation of species in situ – there is a great deal of misunderstanding about that*," John Sellar, formerly chief of enforcement for CITES

The CITES representatives of the signatory parties are often known to collaborate to promote trade rather than any other imperative, as evidenced at CITES Conference of Parties ("*Another Missed Opportunity by CITES*" October 2016).

'Legal' is not a defence when applied within a vacuum detached from the realistic outcomes of its application, social acceptance and likely negative consequences.

2.4.8 Ethical/Moral Leadership

Why is ethical/moral leadership important and how does that get distorted when it comes to trophy hunting and the application of different standards (*speciesism*) when it comes to sentient wildlife?

The compatibility of the International Union for Conservation of Nature's (IUCN's) membership with ethical/moral leadership and therefore the IUCN's impartiality when preparing trophy hunting guidance has been called into question by a 2017 legal conclusion (only made public in 2019) by the World Commission on Environmental Law (WCEL) Ethics Specialist Group (ESG).

The ESG's legal analysis ("*Compatibility of Trophy Hunting as a Form of Sustainable Use with IUCN's Objectives*") concluded that:

> *"Trophy hunting is not consistent with "sustainable use". And even if it were, "sustainable use" is not the sole criterion for the decision on eligibility of organizations seeking IUCN membership. The critical question is whether trophy hunting as it is practiced by individuals and promoted by certain hunting organizations may be consistent with IUCN's general objectives as expressed in Articles 2 and 7. This is clearly not the case. Any other view would threaten IUCN's credibility for providing moral and ethical leadership in conservation policies. It would certainly undermine the many efforts of IUCN members to promote a just and sustainable world."*

One of the IUCN's members is Conservation Force Incorporated (in USA - "*a Louisiana-based charity that advocates trophy hunting as a conservation tool*") - an IUCN member and an

observer member at CITES. Conservation Force Inc. recently contributed to the *'Open Letter (Dickman et al.)'* in 'Science.' It should be noted that Conservation Force Inc., was founded by John Jackson, former Safari Club International (SCI) CEO.

The question is, can Conservation Force Inc. be seen as a credible, impartial member of a world body (previously renowned for its impartiality) such as the IUCN when Conservation Force Inc.'s impartiality is openly questioned in the public media:

> "……..*critics have described it [Conservation Force Inc.] as a "an around-the-clock international communication headquarters and advocacy 'war room'" for the pro-hunting lobby that has repeatedly blocked attempts to protect species including lions and giraffes - "Anti-hunting groups seek to oust big-game hunters from global conservation body*," The Telegraph, 3 October 2019

It is not always transparent when Conservation Force Inc., similar members and consultants influence IUCN publications such as Roe et al. 2016 trophy hunting guidance, but there is reason to question the underlying credibility of the IUCN's membership and therefore, its output and policies, particularly when there is clear legal, ESG opinion clarifying the incompatibility of IUCN's stated policies on trophy hunting and IUCN's credibility for moral and ethical leadership in conservation policies.

2.4.9 A Case Study – Is Trophy Hunting Moral/Ethical?

The so-called "*antis*" that choose to speak out for the voiceless wildlife are often accused by the pro-hunters of being too "*emotional*" in support of animal/wildlife welfare – this suggests the "*antis*" have a different moral/ethical perspective.

Such contradictions in the trophy hunting debate are founded in deontology doctrine versus consequentialist doctrine – the former is enshrined in establishing if the morality of an action is plainly wrong, or can be deemed acceptable under certain pre-conditions. The latter is enshrined in the morality of an action judged solely by its consequences, does the end justify the means?

When considering the morals and ethics encompassed in trophy hunting and the industry surrounding it, how are the moral and ethical values set, are they based upon normative (modern day) expectations? How much does speciesism influence such moral and ethical values?

2.4.9.1 A Thought Experiment

What happens if trophy hunting's morals and ethics are applied in a human species scenario, rather than the attrition of wildlife in the claimed goal of conservation? What if those moral and ethical arguments were fully explored and extended, rather than the financial and scientific arguments against trophy hunting in the ongoing debate?

One 2016 paper did just that with startling/disturbing results – the thought experiment explored under the title, "*This Is Speciesism*" provides the main gist of a purely 'ethical' argument against Trophy Hunting:

> "*The Trophy Hunting Debate – A Case of Ethics*," Aejaz Ahmad (Department of Political Science, University of Delhi), Economic & Political Weekly, Vol 51, Issue No 26 – 27, 26 June 2016

The paper hypothesises, for the sake of argument, a precise thought experiment based upon trophy hunting's advocates proffered consequentialism justification ('sacrificing some to save the many') if applied to a human condition:

> "*In libertarian parlance, there is no incentive, other than voluntary, for poverty eradication. The debates on poverty constitute one of the most important areas of contemporary political economy and moral philosophy. These debates have been trying to figure out whether we have any obligations towards the poor, with poverty sometimes seen as natural (Pogge 2008). Following this, why not invite rich people to kill "some poor people" for "fun" or to satisfy their "kingly passions" by paying for it just like hunting wild animals? Why not allow such killings for generating huge funds which can thereafter be used for otherwise incentive-less poverty eradication programmes? Outrageous, isn't it? How then is trophy hunting, which invokes similar kind of reasoning, ethical? Why doesn't trophy hunting evoke similar outrage? It doesn't because we have created values about animals that are one-sided or unilateral. Animals don't participate in such value creation about them. This is what speciesism is all about*.
>
> *At the locus of all criticism that is levelled at trophy hunting is the very act of killing and the manner in which it is done. The magnitude of suffering, both physical and emotional, that it causes is seldom taken into account. In the entire debate of trophy*

> *hunting that is largely about its economic benefits this element of the practice is ignored (Gunn 2001). Last but not least, such reasoning can also be challenged from the standpoint of animal rights. Trophy hunting, it is argued, takes the rights discourse about animals as hostage. It not only denies even the minutest "agency as living beings" to the animals, but also transforms their very existence into an instrument for GDP, let alone for conservation of wildlife per se.*
>
> *…….From any ethical point of view, justifying animal killings for the sake of "entertainment" is untenable."*

Therefore, the conclusion from this paper is that from a moral and ethical viewpoint, trophy hunting is untenable, the consequentialist justification given by trophy hunting's advocates is based upon speciesism.

2.5 Question 9: "*Options one and two introduce further restrictions for certain species. Which species do you think these further restrictions should apply to?*"

The list of species which should be include for restrictions are all those in Appendices I and II of CITES, and all those above the category of "*Least Concern"* on the IUCN Red List of Threatened Species ("*Near Threatened*," "*Vulnerable*," "*Endangered*," "*Critically Endangered*," "*Extinct in the Wild*" - the latter could still be bred in captivity for trophy hunting in theory, such as the Père David deer, trophy hunted within the UK at Woburn Abbey but listed (IUCN Red List) as "*Extinct in the wild*" for example).

2.5.1 Why not Annex A or B of the EU Wildlife Trade Regulations?

Annex A or B of the EU WTR lists species exploited for commercial trade, but with some species listed also targeted for trophy hunting. However, there are many additional species targeted for trophy hunting than listed in the EU WTR commercial trade annexes, hence such hunting trophy imports and exports need to be identified from CITES and IUCN Red Lists. A couple of examples of trophy hunted species not listed by the EU WTR (or CITES) follow.

2.5.1.1 Père David deer (Elaphurus davidianus)

There are species bred in captivity that are extinct in their native country, such as the Père David deer (*Elaphurus davidianus*) – listed as "*Extinct in the wild*" (IUCN Red List).

The Père David deer (*Elaphurus davidianus)* is not listed by CITES (Species+), or within the EU Wildlife Trade Regulations (WTR) appendices, Council Regulation (EC) No 338/97 (EC 20 January 2017). But, the Père David deer is trophy hunted within the UK, such as Woburn Abbey.

2.5.1.2 *Atlantic puffin (Fratercula arctica)*

The Atlantic puffin is trophy hunted in Iceland and the Faroe Islands (Thorup et al. 2014), but any hunter can pay to participate in the bird's shooting/netting and call it "*sport.*" The Atlantic puffin is a national dish in Iceland, where the species does not have legal protection (killing, injuring or interfering with puffins and their nests is against the law in the UK). The hunting of puffin's for meat/human consumption does not preclude some birds being imported into the UK for taxidermy, or as a pre-existing trophy.

Figure 3 – "Trophy hunters are being told they can kill up to 100 puffins per hunting trip in Iceland" - "Trophy hunters paying to shoot 100 puffins at a time during trips to Iceland," The Independent, 29 July 2019

The bird ranges along the coasts of northern Europe, south to northern France, the British Isles, the Faroe Islands, Iceland, Greenland, Norway (and also the Canadian Atlantic coast south to Maine, USA).

The European population of Atlantic puffin is listed as "*Endangered*" (IUCN Red List), with a decreasing population trend. But the Atlantic puffin is not listed by CITES (Species+) or listed under EU WTR (Council Regulation (EC) No 338/97 (EC 20 January 2017)).

The IUCN states that the observed and projected population declines of the Atlantic puffin are severe:

> "*The population in Iceland and Norway, which together account for 80% of the European population, decreased markedly since the early 2000s and, although the population size was estimated to be increasing in the UK during 1969-2000, evidence suggests that it has undergone declines or probable declines since 2000…..As a result, the population size in Europe is estimated and projected to decrease by 50-79% during 2000-2065 (three generations)*" - IUCN Red List

Regardless of the Atlantic puffin being considered as a human menu option in Iceland/Faroe Islands, there is no reason to allow anyone to import any resulting Atlantic puffin as a hunting trophy into the UK.

2.6 Question 10: "*Do you think there should be different restrictions on hunting trophies imported and exported to and from countries within the EU, compared with countries outside of the EU?*"

There should be no differences in the restrictions of hunting trophies imported and exported to and from countries within the EU, compared with countries outside of the EU.

2.7 Question 11: "*Do you have additional information or evidence on:" a. "Potential impacts of increased restrictions as set out in options one to three?*"

Any tightening of UK trophy hunting import/export restrictions will send a strong, international message that the 'sport' of trophy hunting is controversial, is under intense scrutiny and its claimed benefits are not always apparent in reality.

In turn, non-consumptive wildlife tourism will be encouraged and more innovative ways to protect wildlife habitat promoted, based upon morally acceptable policies in today's society.

However, where remote communities do rely on trophy hunting subsistence (which does not necessarily equate to species conservation), then the transition needs to be managed (reference paragraphs 3.8.2 and 3.11.1).

2.8 Question 11: "*Do you have additional information or evidence on:" b. "Potential barriers to implementation for options one to three?*"

Trophy hunting import/export restrictions have been implemented in the USA, the Netherlands, France and Australia without apparent difficulty. Perhaps there is some read-across experience that can be shared by relevant authorities in these countries to aid the UK's advancement.

The only other barriers are the pre-requisite political will to see through the necessary legislation for hunting trophy import restrictions, plus the necessary funding and infrastructure provision to fully police and enforcement such restrictions.

2.9 Question 12: "*In options one, two and three, do you think there should be different restrictions on hunting trophies obtained from; wild animals, captive bred animals, or animals involved in canned hunting?*"

The restrictions proposed as options one, two and three are all equally applicable to wild animals, captive bred animals, or animals involved in canned hunting – so there should not be different restrictions on hunting trophies obtained from wild animals, captive bred animals, or animals involved in canned hunting.

The definition given within DEFRA, November 2019, paragraph 14. 'canned hunting' and 'captive-bred hunting' is not definitive – there is a subjective and variable line between what constitutes a "*small enclosure*" ("*canned*") and hunting of "*animals that are bred in captivity*" although the hunting "*does not necessarily take place within a confined enclosure*" ("*captive*"). Is such a non-confined enclosure "*small*" or not? Can any such enclosure (big or small) provide the hunted quarry any means of escape in reality, ie. is there an element of "*fair chase*"?:

> Fair Chase – "*A set of conditions under which an animal being hunted has a genuinely fair chance to evade its hunter for extended periods and on multiple occasions. Essentially, under these conditions, a kill is not guaranteed, even if the hunt lasts for weeks*"(Harvey 2018))?

The definition of enclosure size, fair chase etc. is subjective – hence, so is trying to draw a definitive line between "*canned*" or "*captive*" derived hunting trophies. Animals (mainly lions)

from both categories are bred for commercial purposes, to be hunted and killed regardless of enclosure size – both "*canned*" or "*captive*" hunting offers a chance of a kill approaching 100%.

Perhaps better sub-definitions (Harvey 2018) to use are:

> **Canned** – "*The unethical hunting of predominantly captive-origin lions (though not necessarily limited to this) under conditions that preclude 'fair chase' due to mental (human habituation) and physical constraints (relatively small enclosures that offer no chance of escape), or some degree of both*."
>
> **Captive** – "*Lions [though not necessarily limited to this] bred in conditions of captivity for the sole purpose of being commercially exploited through a range of 'sectors' within the captive lion industry. Managers actively manipulate all vital rates and demographics. Some are bred with minimal human imprinting ('ranched') and hunted in larger enclosures than their hand-reared counterparts. Others are used for cub petting activities, or what South African Predator Association (SAPA) calls 'working' or 'tourism' lions. In petting, the cubs are exploited either at the breeding facility or sold from breeding farms to the petting facilities. Some facilities rent cubs from breeders and return them once they have fulfilled their purpose. Once cubs are too old to pet, they are either sold to hunting facilities (some of which are directly linked to the petting facilities) or become 'walking' lions, where tourists can walk with lions, before being sold either directly into the bone trade or to the canned hunting industry. Because of the large stock of intensive-bred lions, and the declining demand for canned hunting, many lions are being slaughtered directly for the sale of their skeletons into the bone trade*."

The Republic of South Africa, Department of Environmental Affairs (DEA) ("*Lion Management in South Africa*") makes it clear that "*it is prohibited to hunt lion:*"

- *in a controlled environment (the minimum size of the hunting camp is not prescribed in the Threatened or Protected Species (TOPS) Regulations, as it will differ from area to area. However,* ***the minimum [enclosure/"hunting camp"] size is prescribed in many of the Provincial Acts/Ordinances****)* – note 'many' is not all, and how often are such stipulations actually inspected for compliance and enforced in reality by Province Environmental Management Inspectors?;

- *while it is under the influence of a tranquiliser (the minimum time frame before a lion may be hunted after it has been darted, is not prescribed in the TOPS Regulations but is regulated in terms of some of the Provincial Acts/Ordinances)*;

- *with certain methods, such as poison, snares, air guns, shot guns, or by luring it with scent or smell.*

The DEA do not attend hunts themselves and its questionable how much checking any Province Environmental Management Inspectors (EMI) actually conduct to ensure any stated objective, such as "*Do compliance monitoring at hunting operations with foreign hunters*."

Therefore, trying to define acceptable enclosure sizes and trying to make canned/captive hunting sound like it has an element of '*fair chase'* within any enclosed area is merely a marketing ploy – regardless of the presence of '*fair chase'* or otherwise, a target animal still bleeds and dies to provide a hunting trophy, whether the hunt took two minutes in an enclosure, or two weeks in truly open terrain.

Canned/captive-bred lion hunts are cheaper and easier to organise and provision than wild lion hunts. The former are within a known (enclosed) area and the target is clearly released or targeted for the purpose. The latter, wild hunt is just that, typically over a much larger range and the target has to be sought typically over many more days in comparison (with no guarantee of a kill).

The lack of any credible conservation, ethics and morals in canned hunting is clearly given in a 2012 Bob Vitro video (video link at "*Canned duplicity and decline*," IWB, 8 July 2016):

> "*Between the killing party, eight female and two male lions (hand-bred 'canned' lions) were shot from tree tops, whilst hiding in burrows and cowering against enclosure fencing……the lions were simply seeking to evade the massed hunters' guns suddenly raining upon them. The target animal's bewilderment is palpable and rudimentary evasion opportunities heart wrenching*"

2.9.1 Wild Animals

In the Introduction (paragraph 1) some of trophy hunting's claims and failures have been summarised. There are also additional species specific case studies at paragraph 3.7.1.

However, no matter how much scientific study one reads on the subject of trophy hunting, there is always the espoused theory that "*if*" well regulated, then trophy hunting does contribute to conservation, which normally comes down to trusting that the value put on the target animal makes is valuable and makes it worth saving ("*if it pays, it stays*").

However, there is always the "*poorly-regulated*" trophy hunting highlighted within the very same papers – the lack of scientific hunting quota setting; unknown target population data, over-harvesting, biased targeting of the best examples to obtain the best trophy, targeting of too young a trophy animal etc.:

> "*Despite their claims, trophy hunters do not generally target problem, redundant or old and infirm animals, preferring to set their sights on animals with impressive traits – the darkest manes, the biggest tusks, the longest horns. This often results in the killing of key individuals, removing vital genetic resources and causing disruption to family groups, populations and, by extension, the wider ecosystems of which they form a part.*
>
> *Far from incentivising wildlife conservation and helping local communities, trophy hunting operations generate only a tiny proportion of wildlife tourism income, with most of the fees they pay benefitting a few officials, outfitters, and professional hunting guides. Research suggest that little, if any, of the money hunters pay to make their kills ever filters down to local communities*" - "*Trophy Hunting; Busting the myths and exposing the cruelty*," Born Free Foundation, July 2019

With the underlying background that the trophy is being taken from dwindling wild species populations already facing habitat loss, climate change and many other perils, then trophy hunting is only making a bad situation worse:

> "*Never was this doctrine ("If it pays it stays") more evident than in community-based conservation in Namibia. It is all about money. Financial benefits to the community were the focus. National pride, ethics, aesthetics and sound ecological practices shared a sad second place. If any place at all. Everything must have a price tag*" – "*End of the Game for Namibia*," Christiaan Bakkes, Africa Geographic, 23 March 2015

Therefore, I see no reason to accept the "*faith*" that well-regulated trophy hunting of wild species exists for any altruistic conservation imperative. It seems to be mainly driven by commercial needs, subsistence welfare for local communities and a trophy hunter's self-gratification.

Even if trophy hunting income did pay the majority of that income to conservation (rather than the majority of that income going into profiteer's pockets), then it is nowhere near enough to cover the conservation costs. In the 2018 book, "*Lion Hearted*" (page 241) Andrew Loveridge explains:

> "*…..does the revenue from trophy hunting cover the costs of conservation? In Africa, on average, the annual cost of conservation (such as employment of park rangers, maintenance of infrastructure, and protection from poachers) comes in at around $500 per square kilometre (Lindsey et al. 2017). This is actually quite modest compared to what is spent on reserves in North America, where conservation expenditure sits at around $2,500 per square kilometre* [Yellowstone National Park's budget is even higher at $4,100 per square kilometre per year] *(Adams 2004). According to conservation biologist, Peter Lindsey, revenues from hunting concessions amount to around $400 per square kilometre per year (Lindsey et al. 2012). Deduct hunting concession and trophy fees, then subtract operating costs and profits, and you discover that hunting revenue does not come close to covering the actual costs of conservation.*"

Packer et al. (2013) calculated that the minimum of $2,500 per square kilometre per year should be applied to protect a lion population (at half its potential size) in an unfenced area. A Hwange National Park lion, such as Cecil, by the time he was 12 years old (as he was when killed for a hunting trophy in July 2015) occupied around 500 square kilometres, the average range of a lion in Hwange (Loveridge 2018).

Therefore, the investment made in Cecil's protection with Hwange National Park could well have exceeded $1 million a year (500 square kilometres x £2,500 per square kilometre per year x 12 years = $15m).

Chardonnet (IUCN 2019b) estimates a good hunting-zone density is two lions within 100 square kilometres. To shoot one lion sustainably would require 5,000 square kilometres and the annual upkeep of that area would be about $4-million.

Hence, the execution of a lion such as Cecil for a hunting trophy for a mere $50,000 looks like a very poor return on investment, with no potential ongoing conservation benefit for any remaining Hwange lions:

> $50,000 equates to less than 20 square kilometres protected for a year at $2,500 per square kilometre per year to protect and conserve a lion (Packer et al. 2013). Even when the $15m 'protection costs' are pro-rated to multiple lions and species occupying the same protected area, $50,000 is still a poor return for a pride male lion such as Cecil.

> No one will pay $4-million to shoot a lion. "*This shows how hunting is powerless to fund its own conservation*" Chardonnet (IUCN 2019b). "*The hunting market, it says, simply does not have the means to pay the real price of safaris. So hunting is running down its prime resource*" – Pinnock, D. 2019b

It should be noted that Hwange National Park's conservation budget is perhaps $276 (Loveridge 2018) per square kilometre per year – but $50,000 still only buys around 181 square kilometres protected for a year, assuming all of the trophy fee went into conservation anyway, which it did not, as Hwange National Park did not directly benefit form Cecil's execution, as Cecil was lured into a hunting concession adjoining Hwange National Park to meet his fate.

The bottom line is, trophy hunting grossly undervalues wildlife, but regardless, very little of any trophy hunting fee filters down to cover the realistic costs of conserving the very wildlife that trophy hunting takes from protected areas and wildlife reserves. As demonstrated in the case of Cecil the lion above, if hunting concession truly conserved wildlife, then why the need to lure lions like Cecil from the protection of Hwange National park into an empty hunting concession to be killed? Why aren't the hunting concessions themselves teeming with wildlife for the trophy hunters to kill? The bottom line is, trophy hunting has very little to do with conservation imperatives. The notion of trickle- down economics to local communities (to enshrine wildlife and mitigate human wildlife conflict) is also sporadic and offers poor returns (if any) – reference paragraphs 3.11 and 3.12.

2.9.2 Captive Bred Animals

Perhaps the 'pinnacle' of captive ('ranch') lion breeding is the Bubye Valley Conservancy (B.V.C.), Zimbabwe opened in 1999 and is a privately-owned reserve of some 850,000 acres (3,440 square kilometres). From IUCN sub-population numbers, the estimated lion sub-population in Bubye, Zimbabwe was 9 lions in 1993, but by 2014 it was 330 lions. Was this recovery due to B.V.C.? B.V.C claimed in 2016 to have some 500 lions in its conservancy. The B.V.C. lion population is also monitored for research purposes by Wild Conservation Research Unit (WildCRU), Oxford University. So, could this be given as an example of a lion conservation success story which includes lion trophy hunting? Can such a private big-cat 'conservancy' contribute to saving the species, despite a reliance on trophy hunting for income?

Is the B.V.C. lion population now large enough and genetically diverse enough to continue to grow in a healthy manner to the reserve's capacity limit? Could such a conservancy be funded

without hunting (of course, but the alternative source of funding is the key)? LionAid (2016) sheds some light on Bubye (B.V.C):

> *"Bubye (B.V.C)…… is a fenced reserve. Lions were introduced as a hunting commodity and are now being trophy hunted."*

The lions' existence at B.V.C is somewhat synthetic, with lions more densely packed into a fenced reserve than they would enjoy in the wild (with consequent negative impacts on the B.V.C lions' natural behaviour) – the genetic diversity and potential for re-wilding (ie. the conservation value) of any B.V.C lions remains unknown:

> Dr Pieter Kat (LionAid) says the 3 400 km² conservancy has about 15 lions per 100 km². The natural density of lions, for example, in the Kruger Park is about 5-6 per 100 km² in the north, which is similar in habitat to Bubye, and 7-8/100 km² in the south. Bubye therefore is more than double the natural density for lions – Annamiticus, 31 March 2016

Lions exist in strong pride structures. Any disruption to a given pride, or territory disputes between an established pride and a 'new' pride can be devastating. So, the chances of any successful, or risk-free reintroduction of any 'canned,' 'captive' or indeed 'ranch' stock into the wild is pure fantasy.

Therefore, in terms of Option one, or two, captive bred lions (for example) serve no recognisable conservation purpose with regard to supplementing wild lion populations – unless one buys into the theory that lions must be shot to provide trophies, so if captive ones can't be shot, then wild ones will suffer increased trophy hunting pressure.

2.9.3 Canned/Captive lions

The canned/captive hunting industry itself likes to use the term "*ranch lions*" to try and disguise the canned/captive nature of its stock is essentially farmed for commercial purposes.

A 2010 South African legal ruling ("*The Supreme Court of Appeal of South Africa Judgement*," Case No. 72/10, 29 November 2010) declared captive lion breeding as 'farming' and of no conservation value. This legal opinion has not changed in the intervening years to the present day.

In a 7 March 2016 article (Note: *published by Wildboere, but no longer available on-line*) entitled "*9 Myths About Captive-bred Lions*," written by Professor Pieter JJS Potgieter (then President of the South African Predator Association (SAPA)), the claim was made that the captive-bred "*ranch lions*" (sic) industry is all about the industry's 'love of lions and conservation.' Note: The SAPA likes to confuse and blend 'canned'/'captive' lion breeding with wildlife ranching, when no true comparison actually exists, as explained below.

In an open letter (dated 29 November 2017) to Secretary Zinke (then head of the United States Fish and Wildlife Service (USFWS)), the African Lion Conservation Community's posted response to the SAPA's letter (pleading for the lifting of captive lion trophy hunting import restriction) made the distinction clear between wildlife ranching and the SAPA's canned/captive breeding. The African Lion Conservation Community summarised the conservation claims of the captive breeding industry as follows:

> "*The [SAPA] letter appears to associate the captive lion breeding industry with the wildlife ranching industry as a single entity. While there have been conservation benefits stemming from the expansion of South Africa's wildlife ranching industry, we point out that captive lion breeding cannot claim any of the conservation successes that the wildlife ranching industry has achieved. Captive bred lions are kept in small, intensively-managed enclosures that have been cleared of most of their indigenous vegetation, thus removing the natural habitat of the area. In no way does this type of land management contribute to biodiversity conservation, or support claims of benefits for mesocarnivores and veld rehabilitation, linked with lion breeding*."

Furthermore, the open letter from the African Lion Conservation Community made clear that:

> *"[SAPA] claims that captive bred lions are required for reintroduction and species restoration are not based on any scientific evidence and are contradictory to the published, peer reviewed evidence of several of the world's leading lion conservationists……..South Africa, where free ranging lions have recently been down-listed from Vulnerable to Least Concern conservation status. This is due to ongoing, concerted conservation action and concerted reintroductions, all of which have no connections with the captive lion industry."*

In an attempt to 'prove' that any captive raised lion (no matter its background) can indeed be rehabilitated into the wild, Professor Pieter JJS Potgieter ("*9 Myths About Captive-bred Lions*," 7 March 2016) cited Elsa the lioness as a key example of successful rehabilitation (one example from the 1960s duly noted).

Elsa's rehabilitation was of course the theme of the 1966 'Born Free' film and Professor Pieter JJS Potgieter stated in his article "*Elsa the lioness made the transition from pet lion to wild lion mama pretty easily.*" Professor Pieter JJS Potgieter's reference to Elsa is puerile and lacks any scientific weight that might give a modicum of credibility to the captive lion breeder's otherwise unsubstantiated conservation claims.

Furthermore, according to Professor Pieter JJS Potgieter "*There are numerous cases where captive-bred lions have successfully made the transition to become wild lions. And they did it with little fuss and with little if any coaxing. Currently there are two studies of note, one on captive-bred lions in the wild in Zambia and another in the Zambezi River region.*" The exact scientific citations to this purported work are sadly lacking.

> "*SAPA claims, in a 2016 article, that two lions introduced to the Warthog ranch have 'proved' that captive breeding allows easy re-introduction to the wild. But Warthog is an accredited hunting ranch, and it is not clear that anything about the introduction of these two lions has contributed to conservation. Certainly, there is no follow-up scientific research showing the progress of these two particular lions. What the article seems to miss, too, is that while a lion may preserve the instinct to hunt, this is hardly the only criteria by which successful reintroduction is measured*" - (Harvey 2018)

Therefore, canned/captive lion breeding has never had any independently proven conservation value and the captive industry's future input into wild lion conservation is not required by the African Lion Conservation Community (African Lion Conservation Community 2017).

Wild lions live in complex and dynamic social structures – introducing any lion (let alone a captive bred lions) into a wild lion environment if fraught with risk:

> '*reintroducing large carnivores from captivity into the wild is profoundly limited by biological, technical, financial and sociological factors*' - Hunter et al. 2013

As an added worry, South Africa's game breeding industry has obtained the listing of wild species including lions (IWB 2019d) (plus 24 specific indigenous and six non-indigenous game species, amongst others, lechwe, white and black rhinoceros, cheetah and a number of non-indigenous deer species, plus 12 game species which included black wildebeest, blue wildebeest, blue duiker, bontebok, gemsbok, impala, oribi, red hartebeest, roan, sable, springbok and tsessebe), under a regime - namely, the Republic of South Africa's Animal Improvement Act (AIA,) 1998. The AIA allows such game breeders to genetically manipulate listed species, under the pretence that such actions are undertaken to "*To provide for the*

breeding, identification and utilisation of genetically superior animals in order to improve the production and performance of animals in the interest of the Republic" – whatever that means.

Therefore, the industry is moving towards genetic modification, ie. to create lions (*Panthera leo* – African lion) as a new, big boned sub-species for example (ie. '*Panthera leo villam'* – 'Farm' African lion), that can be promoted as genetically distinguished from the sub-species taxonomy *Panthera leo leo, or Panthera leo melanchaita….?*

Such disparate policies have potentially negative consequences for conservation of wild species, threatening the genetic purity of wild species if genetically bred animals escape and inter-breed (*"South Africa struggles to manage wildlife ranching: why it's a problem"*).

The African lion is listed by the International Union for Conservation of Nature (IUCN) Red List as "*Vulnerable*" and hence the industry could seek to circumvent 'pesky' restrictions on specific taxonomy, as imposed by CITES and importing signatories by creating a new, farmed sub-species. This then opens up the prospect of unrestricted lion bone trade exports of '*Panthera leo villam'* unhindered by CITES oversight/export reporting and any CITES imposed quota restrictions.

In conclusion, with no conservation value, canned/captive lion trophies clearly do not qualify for any leniency under Option one, two, or three. There is also the risk of miscategorising on CITES (still paper based) permits system of canned/captive ('C') sourced as wild ('W') to circumvent the obvious lack of conservation credentials from a canned/captive trophy hunting (Ammann 2015, EMS Foundation 2018). However, there is a growing lobby (Nature Needs More, "*e-permits*") seeking for modernisation of the CITES permit system in order to try to stamp out misuse and corruption, but electronic permits – *eCITES BaseSolution* system has been discussed for nearly a decade with no progress made (Nature Needs More, "*In 44 Years, CITES And IUCN Have Provided NO Proof Sustainable Use Is Working*").

In early September 2016, the renowned body of scientists, International Union for Conservation of Nature (IUCN) passed Motion 009 – "*the prohibition by the South African Government on the capture of wild lions for breeding or keeping in captivity.*"

> IUCN Motion 009 – "*Terminating the hunting of captive-bred lions (Panthera leo) and other predators and captive breeding for commercial, non-conservation purposes*" – "*NOTING that the great majority of hunters regard 'canned shooting' as an ethically repugnant embarrassment*" – IUCN's Motion 009 (WCC 2016 Res 13)

Only recently has any hunting association had the (convenient) epiphany that canned/captive hunting is bad for the image of trophy hunting and decided to drop 'canned' from their approved activities list (after over 20 years of past support).

The canned/captive industry is also riven with illicit activity:

> *"The association between some of those involved in the industry, and illegal trade in other wildlife products, and the increasing association between lion breeding and the fast-expanding trade in donkey meat and skins, are highlighted"* – "*Cash before conservation*," Born Free Foundation, 2018

It is high time that South Africa's commercial, non-conservation purpose canned/captive big cat breeding industry was shut down in its entirety, in accordance with the Republic of South Africa, Parliamentary Report, 13 November 2018

2.9.3.1 Canned/Captive Lion Bone Trade

A by-product of South Africa's canned/captive lion hunting industry is the sale of lion derivatives (meaning lion bones, bone pieces, bone products, skeletons and derivative products such as lion claws, skulls and teeth of lion) to the Asian, Traditional Chinese Medicine (TCM) market – where lion bones are used as a substitute in products such as 'tiger bone wine' and 'tiger (lion) cakes' etc., but other felids such as leopards are also illicitly targeted for TCM purposes.

These TCM products are sold as premium remedies (despite no proven efficacy). The lion bone trade stared in 2008, without any precautionary assessment by the Republic of South Africa, Department of Environmental Affairs (DEA) of the potential risk to global wild lion populations from stimulated demand.

The action was taken allegedly to supply the substitute `tiger bone' market after the 2007 (CoP14) CITES "*ban*" (decision 14.69) to curtail any commercial tiger farming:

> "*Parties with intensive operations breeding tigers on a commercial scale shall implement measures to restrict the captive population to a level supportive only to conserving wild tigers; tigers should not be bred for trade in their parts and derivatives*"

The DEA appears to be under the delusion that the trade in tiger bones has subsided because of this 2007 CITES "*ban*:"

> "A *2015 study commissioned by TRAFFIC* ["*Bones of Contention*"] *raised concerns around the shift in lion and tiger bone trade; namely that when the trade in tiger bone was banned; the trade shifted and bones were sourced from South Africa, available as a by-product of the hunting of captive bred lions*" - DEA's 28 June 2017 media statement

This need for substitute lion bones is a delusion, because intensive tiger framing has not abated since 2007, in fact it has got worse:

- the 2015 "*Bones of Contention*" report [page 7 - 10] cited by the DEA suggests South Africa was/is still supplying tiger bones/parts (in contravention of CITES decision 14.69);

- *"South Africa allows lion and tiger farming for commercial trade in parts and derivatives….in 2015, 280 tigers were estimated to be in at least 44 facilities in South Africa*" - "*The Lion's Share.*" It is believed that none of the tiger breeding facilities in South Africa are CITES registered, with the South African Deputy Director CITES Policy Development & Implementation believing South Africa's tiger breeding is non-commercial and therefore, CITES registration is not necessary;

    - However, CITES CoP18 (2019) Draft decision Doc. 71.2 reiterates - "*Parties with intensive operations breeding tigers on a commercial scale shall implement measures to restrict the captive population to a level supportive only to conserving wild tigers;* ***tigers should not be bred for trade in their parts and derivatives***"

- CITES Standing Committee 71, Doc. 19 states that "*the Secretariat further reported that it had identified the number and location of facilities which may be of concern keeping Asian big cat species in captivity*" – listing 66 tiger breeding facilities including 1 in South Africa.

- The 2017, Environmental Investigation Agency (EIA), "*The Lion's Share*," suggests there are more than 6,000 tigers held in captive breeding facilities in China, Laos and Vietnam to supply tiger bones to the TCM industry (more than in 2008 when CITES'

> "*ban*" guidance was supposed to be implemented), plus South Africa's exportation of tiger parts.

It is estimated that no less than 70 tonnes of lion bones/skeletons etc. have been shipped to East-Southeast Asia [from Africa] since 2008, 64% in the three years from 2014 – 2017, with South Africa exporting 99% of all lion skeletons listed on the CITES trade database up to the end of 2015 (Williams, V.T. et al. 2017).

Since 2017, South Africa (the DEA) has issued standalone lion bone trade export quotas (2017 - "*800 skeletons*," 2018 - "*1,500 skeletons*") whereby canned/captive lions are euthanized specifically to supply the lion bone trade (ie. without any prerequisite trophy hunting element).

The 2017 study, *"A roaring trade? The legal trade in Panthera leo bones from Africa to East-Southeast Asia,"* (Williams V.T. et al. 2017) highlighted the lack of forethought within the lion bone trade suggesting that:

> "……*evaluation of the legal and illegal trade is necessary in African lion range states where vulnerable wild lion populations are likely to be adversely affected*."

The report's authors identified "*the concerns that the legalised sale of lion bones, supplied by captive-bred lions, from South Africa is:*

> *(i) impeding efforts to curb the tiger trade because access to lion parts might be perpetuating and/or expanding the market for large felid bones, and thereby rekindling efforts to poach tigers as the demand is supplied, and*
>
> *(ii) abetting the illegal acquisition and trade in lion bones and derivatives across Africa (seemingly evinced through the rise in incidences of lion poaching and trafficking)*."

Recent evidence (August 2017) suggest this latter threat, might be manifesting as the 'trade' develops. In fact some countries have taken pre-emptive action to try to deter the likely onset of wild lion poaching in the wake of South Africa's 2017 "*800 skeletons*" quota – in July 2017, Namibia, introduced a N$1m fine/10 year jail term for possessing lion bones (with proposals to increase this to a potential N$15m/15 year jail term for illegal possession of wildlife products).

Field observations indicate that wild lions in southern Africa, specifically Mozambique, have been under increasing threat for their parts. The Greater Limpopo Carnivore Programme has recorded an escalation in the number of wild lions poached on the Mozambican side of the Great Limpopo Transfrontier Conservation Area, with a marked increase since 2015. They report that 26% of the lion population in this park has been lost due to poaching for their body parts.

These signs are a pre-cursor/warning that allowing a stand-alone lion bone trade (and/or a by-product lion bone trade from captive lion trophy hunting) to become legitimised and flourish poses a threat to the future survival of the African lion species on a continent-wide basis.

Williams, V.T. et al. 2019 did not conclusively prove any conservation benefits stemming from South Africa's captive lion breeding industry, but stated:

> "*Aside from considering a possible buffer effect of legal body part exports, questions remain in the conservation role of captive lion breeding for hunting……*"

The South African Predator Association (SAPA) also claims that the hunting of captive bred lions presents direct conservation benefits to wild lions by the supply of 'legal' body parts and taking hunting pressure away from wild lion populations – this is the "*possible buffer*" theory perpetuated by Williams, V.T. et al. 2019.

The SAPA claims that if captive lion hunting is stopped, increased pressure will be placed on wild populations (for hunting and poaching to supply demand for lion bones to the Asian Traditional Chinese Medicine (TCM) market). Yet the SAPA (and/or Williams, V.T. et al. 2019) have not provided any scientific evidence whatsoever to substantiate this theory/claim.

There is no conclusive, peer-reviewed science that supports the 'buffer' theory and hence, the relevance of canned/captive lion hunting and the by-product/stand-alone lion bone trade:

> *"The presence of canned hunting has not led to an alleviation of demand for wild lion hunting, and there are strong theoretical grounds for assuming that they are two different markets in any event. This is demonstrated perhaps most aptly – if anecdotally – in the controversial recent case of a wild lion called Skye hunted in Umbabat on the border of Kruger National Park (Cruise 2018, Pinnock 2018a). The presence of an extensive domestic breeding industry has not resulted in a decline in poaching of wild lions, who increasingly have their claws, teeth and bones removed*" - Harvey 2018

The evidence suggests the SAPA's claims are false with regard to the lion skeleton by-product that results from the captive lion trophy hunting and/or the killing of captive lions specifically for their skeletons/bones. The legal lion bone trade is acting as a catalyst for illicit trade and is starting to put pressure on wild lion populations. More legal trade is not the cure to counter illicit trade. Legal trade is fuelling the potential escalation of illicit trade.

> In a comprehensive report, "*The Extinction Business, South Africa's 'Lion' Bone Trade*," EMS Foundation and Ban Animal Trading, July 2018 the conclusion is South Africa's lion bone trade has "*….created a situation where the legal trade in 'lion' bones is fuelling the illegal trade in lion and tiger bones and providing laundering opportunities for tiger bones in Asian markets.*"

This report also highlighted the links between the 'legal' export of lion bones to known wildlife trafficking syndicates in Vietnam – namely, the Xaysavang Network, an international wild animals trafficking syndicate that facilitates the killing of endangered elephants, rhinos, pangolins, and other species for products such as ivory and rhino horn. Therefore, the 'legal' lion bone trade is happy to do business with known rhino, elephant and other wildlife poachers – hardly a sign of any conservation imperative in the 'legal' lion bone trade:

> "*…the South African CITES Management Authorities continue to issue export permits for 'lion' skeletons to addresses in Laos and elsewhere possibly linked to traffickers, highlights the concern that the big cat captive breeding industry could be associated with illegal wild animal trafficking*"

The question of canned hunting's potential negative impact on wild lion populations, nurturing hunters that graduate to seek wild lion trophies:

> "*The lion farms' creation of a market for canned lion hunts puts a clear price-tag on the head of every wild lion. They create a financial incentive for local people, who collude with poachers or turn a blind eye to illegal lion kills. Trophy-hunters who begin with a captive-bred lion may then graduate to the real, wild thing*" - Fiona Miles, director of Lion's Rock Big Cat Sanctuary

The canned/captive lion hunting and the lion bone trade are fuelling illegal activity – it is not providing any recognisable proven conservation benefit.

2.9.3.2 Legal and Scientific Challenges to the Lion Bone Trade

The stand-alone lion bone trade export quotas set by the South African DEA (2017 – "*800 skeletons*," 2018 "*1,500 skeletons*") are not based on any recognisable science and have been declared unlawful (August 2019) , on the grounds that the DEA did not take animal welfare into account in the setting of lion bone trade quotas.

There have been no public reports released by South Africa Scientific Authority (the South African National Biodiversity Institute (SANBI)) to support any specific lion bone trade quota, only analysis of the trade itself. It seems clear that the "*scientific*" reasons given by Ex Minister Molewa (DEA) for the 2017/2018 lion skeleton quota had no grounding in any scientific reality. In response to journalist Adam Cruise's questions, Mpho Tjlane (the DEA's "*media queries contact*") apparently responded that the lion skeleton quota had been upped for 2018:

> "*…..because they [the lion breeders] have surplus stockpiles of lion bones and they want to get rid of them*" - "*Dodgy skeleton traders and lion slaughterhouses exposed in damning report*," Don Pinnock, Daily Maverick, 19 July 2018

In conclusion, the bottom line is that South Africa's canned/captive lion breeding (and captive tiger breeding) industry, including the lion bone trade has only commercial intent – there is no conservation imperative whatsoever. Hence, any canned/captive lion trophies that support the lion bone trade clearly do not qualify for any leniency under Option one, two or three.

2.9.4 Canned/Captive Rhino

The trophy hunting of captive bred wildlife is not restricted to just lions, but also rhino.

Figure 4 – Canned rhino hunting

As a working example, I am reminded of the "*Kuruman canned rhino hunt*" (as described in "*Kalahari Dream*" (Bevan, P; Mercer, C., 2011)) and the apparently 'legal' "*reasonable, sustainable…..use of natural [rhino] resources.*"

> Note: A summary of this 'hunt' was published in a "*BBC Wildlife*" article (April 2007), "*Tales from the bush*," "*It won't do what is says on the tin*" - authored by Chris Mercer (Campaign Against Canned Hunting).

Basically, what happens when an adult, female (cow), White rhino is not sufficiently aware, or absently forgets that it has been deemed a "*sustainable resource*" earmarked to be executed by a fun-loving trophy hunter?

David Erwee in this case, was just out for kicks and a bit of "*sport*" (sic) after legally buying said rhino at a game auction in 2001. Of course, somewhere the delusion is conjured, that this particular 'captive/canned' female rhino's killing somehow positively contributed to conservation of the wild species.

Regardless, the account of this rhino's killing in a fenced-off Kuruman industrial park started at 9am the same day of said purchase at a nearby game auction:

Rather than 'risk' darting the rhino for transportation (rhino health/survival is at risk under anaesthetic), why not just move the rhino into a nearby fenced area and let the hunt/fun begin there and then?

The 'hunter' first approached towards the "*sustainable*" female rhino on foot (i.a.w regulations), but the hunting party's initial shots (taken from approved calibre rifles of course, i.a.w. regulations), did not do sufficient harm;

The rhino refused to be so easily 'sustainably utilised' it would seem, or perhaps she wanted to dutifully provide 'value' for the hunter's outlay of cash (thereby, providing the hunting party with a feeling of 'euphoria' perhaps and some beneficial "*health or wellbeing"* i.a.w the Constitution);

Over a period of some 8 hours of being shot at, marshalled from her cover within a thicket by the hunting party from their 'safari' vehicle, flushed out of a thicket using a helicopter, eventually this unruly, but stubborn female rhino succumbed to her wounds;

The female rhino knelt down to slowly (and presumably, painfully) expire i.a.w. regulations - her "*sustainable*" contribution to South Africa's benefit dutifully complete (bless her);

Her tormenters drank beers in celebration of their fun, within the fenced-off industrial park enclosure - which must have somehow been transformed with no effort whatsoever into an approved 'wildlife enclosure' suitable for such hunting of a mercifully 're-wilded' rhino (for a half-day's torture) and the rhino's "*active management*" i.a.w regulations;

However, a troublesome resulting court case ensued for Erwee et al. as some accusations were levelled by a bunch of "*antis*"/"*greenies*"/conservationists "*with fundamentalist tendencies*" that in fact this female rhino's hunt had not been conducted completely i.a.w regulations after all;

Luckily the prosecutor (allegedly, an avid hunter) was not fooled for one minute – case dismissed as it was impossible to 'prove' the target rhino had actually suffered

(presumably, because no such animal is a sentient being, capable of suffering pain when sustainably utilised i.a.w the South African Constitution).

It sounds made up doesn't it? The dedication and lengths some will go to sustainably utilise natural resources (in the name of conservation) and thereby protect their human health and well-being as an added bonus/necessity.

The above "*sustainable use of our natural resources*" does not appear "*reasonable*" when considering ethics, morals, the suffering/exploitation and dubious contribution of anything meaningful to conservation.

In conclusion, the bottom line is that South Africa's canned/captive rhino breeding for trophy hunting trophies do not qualify for any leniency under the UK import restriction proposed under Option one, two, or three.

2.9.5 Captive Game Bird Breeding

In the UK, game birds are bred in captivity, specifically for hunting – with any game bird being a hunting trophy under CITES/EU Wildlife Trade Regulations (WTR) – where whole birds are "*legally obtained by the hunter*" for "*personal use.*"

An estimated 50 million game birds are now released annually in the UK into the wild and protected areas, specifically for such hunting. This includes predominantly non-native species, such as pheasants and red-legged partridges, which are intensively bred in captivity before release, but many suffer cruelty in captivity only to be left for dead in the name of "*sport*" (or for the survivors to die of starvation once the sporting season is over and winter sets in).

DEFRA is reviewing (September 2019) its policy with regards to the release of so many game birds on protected lands after a legal challenge by Wild Justice arguing that "*the massive and unregulated increase in the number of pheasants and red-legged partridges put into the British countryside for shooting each year – up from 4 million in the early 1970s – contravened the EU habitats directive*," with an impact on native reptiles and amphibians predation, and links to higher numbers of foxes and avian predators, which in turn prey on rare species such as curlew.

The EU habitats directive was "*a piece of legislation drafted by former Conservative MEP, former civil servant in the environment department, and father of the current UK Prime Minister, one Stanley Johnson. This legislation was of UK origin, in that it started as an idea in Stanley Johnson's head, but applies across all EU member states*" - Wild Justice, 12 September 2019

The over-commercialisation of game bird shooting as a "*sport*" and means to make profit has led to this situation, whereby free-spending, fun loving shooters expect to 'bag' 500 partridge (as promised) on a shoot. Often, those shot are left to rot, as the demand for game birds (via game dealers) is just not there to justify the mass-slaughter.

Then there is environmentally damaging driven grouse shooting - Grouse moors are often over protective of their stock, with shooting estates persecuting birds of prey that hunt their stock – but, there is a better way:

> *".....driven grouse shooting, has been banned at Mar Lodge, the UK's largest national nature reserve, which is owned by the National Trust for Scotland. Called muirburn, this practice involves burning large strips of heather to create fresh shoots for young grouse. With this major departure in practice, Mar Lodge has joined other Highland estate owners who have replaced driven shooting with a more ecologically minded approach.*
>
> *Proponents of walked-up shooting, where the grouse breed without any human intervention, say this method is much closer to the Scandinavian and continental model of hunting – a low-impact activity where quarry is shot for the pot, not in their hundreds for a day's sport" – "'Eagles need to eat too': grouse moors take new approach to shooting,"* The Guardian, 11 August 2019

Perhaps those advocates for game bird shooting should look to blame the profiteers 'ruining' game bird shooting's reputation, not those that point out the cruelty and pitfalls this "*sport*" represents.

Either way, the commercialised, mass-killing of game birds as hunting trophies for "*sport*" is abhorrent. However, banning the export of game bird trophies from the UK is unlikely to have any impact, as most of the shooting market is internal and revolves around mass-slaughter, not any notion of taking a dead game bird to mount as a hunting trophy exhibit (or even for all the game birds killed to be marketed for human consumption).

As stated previously, banning trophy hunting imports or exports, does not stop the trophy hunting killing in theory. But when considering trophy hunting and targets reared in captivity, the UK's gamebird industry should not be over-looked.

2.10 Question 13: "*For options one, two and three, do you think there should be any exemptions considered? Please state your reasons why*"

The only exemptions envisaged are for clear scientific purposes and/or to enhance the propagation, or survival of affected species – ie. where there is a clear, proven, science led conservation purpose.

2.11 Question 14: "*Do you agree with our proposed enforcement regime?*"

Control of Trade in Endangered Species (COTES) Regulations does have provision for fines and a maximum prison sentence of up to five years. But the enforcement regime proposed is only as good as the resources and funding allocated to it.

Enforcement (and to some extent compliance) become infinitely more complex when there is a plethora of 'legal' mechanisms of import/export permitted (and the loop holes, potential misuse and obfuscation such mechanisms present). Therefore, an all-encompassing ban (Option three) is definitive and makes any transgression easier to identify, eliminating opportunities for misinterpretation/abuse.

3 Call for evidence on the scale and impacts of the import and export of hunting trophies

Questions 1 – 4 answered at page 1.

3.1 Question 5: "*Please provide any evidence you have on the impacts on species conservation and the natural environment of the import and export of hunting trophies to and from the UK*"

In August 2017, the Environmental Investigation Agency (EIA) announced "*UK is the largest supplier to the world's ivory markets*" – this study highlighted how much throughput there is of ivory pieces from the UK. At the moment, it remains legal to import (and re-export) an elephant hunting trophy (including the ivory tusks) into and out of the UK.

The UK Ivory Bill (2018) has sought to restrict the ivory trade, but it does not cover hunting trophies - which are considered under CITES to be obtained via 'non-commercial' purposes for 'personal use' activity and provided that the hunt was "*legal and sustainable*" (DEFRA 2018) (where 'sustainable' is somewhat subjective and often unproven), then the trophy can be imported/exported.

Looking at CITES trade database (reference paragraph 3.1.1.1) imports into the UK (and exports to the UK) for elephant derivatives, reveals that some 738 tusks were imported into the UK between 1998 and 2018 (but some 1,500 reported as exported to the UK in the same period – a massive, unexplained anomaly). Trophy hunting is a way to obtain modern ivory and 'legally' import it into the UK, for potentially nefarious purposes and needs to be curtailed, as the UK is a hub for ivory trading (until the UK Ivory Bill (2018) is fully enacted).

There is also evidence that some parties within the UK are happy to try to circumvent hunting trophy restrictions in other countries:

> "*The UK representative [Adrian Sailor, an amateur taxidermist in the West Midlands UK] of a South African safari company [Settlers Safaris] advised an undercover investigator how he could bypass a US ban on importing captive-bred lion trophies by legally importing*

it to the UK, before hiding the lion's skin inside that of a dead red deer and moving it on to America" – "*Horror of lion farms exposed: Year-long investigation reveals sickening trade and ends with a dramatic rescue*," The Daily Mail, 27 April 2019

Looking at CITES trade database (reference paragraph 3.1.1.3), there have been a significant number of lion hunting trophy (both 'Captive' and 'Wild') into the UK in the period 1998 – 2018.

Continuing to allow such imports/exports opens serves no clear conservation purpose (reference paragraph 3.7.3) and opens up the possibility for the illicit activity described above, undermining hunting trophy restrictions in other countries.

3.2 Question 6: "*Are there greater impacts from the import and export of hunting trophies to and from the UK on some species over others?*"

I would suggest that certain vulnerable and threatened species are persecuted more for their commodity value – such as African elephant (ivory), African lion (skin and skeleton/bone), common hippopotamus (ivory) and leopard (skin) – and these are the four species of which trophies are most commonly imported into the UK (i.a.w DEFRA, November 2019, paragraph 40.). But there is also demand for rhinoceros' horn in Asia, whereby rhino horn can still be 'legally' obtained via trophy hunting, plus there is the excessive harvesting of polar bears for hunting trophies.

Giraffe have also become targeted for 'sustainable utilisation,' via trophy hunting with the giraffe's skin turned into furniture coverings (with demand mainly stemming from the USA).

At the 2019, CITES Conference of the Parties (CoP18), Proposal 5 was accepted at Committee, 22 August 2019. This proposal uplisted "*Giraffa camelopardalis [Giraffe] to Appendix II of the Convention*," thus enhancing (in theory) the species' protection from unregulated exploitation in the name of '*Sustainable Utilisation*' – but many pro-trade advocates argue that the administrative burden of compliance will be a drain on vital conservation funds and the giraffe as an overall species population across Africa is not threatened by the attrition. However, the IUCN Red List classes the giraffe as "*Vulnerable*," with the species' population in decline at some 68,000 remaining globally, with the four main threats being habitat loss, civil unrest, poaching and ecological changes. Legal demand for giraffe skins via 'Sustainable Utilisation'/trophy hunting legitimises demand and therefore, potentially encourages poachers also seeking to profit.

All species subject to unjustified human attrition need to be pre-emptively guarded against, as demand can be stimulated and thereby, means sought to profit from demand for such wildlife commodities – including abusing 'legal' trophy hunting loop-holes to obtain and supply such commodities.

3.3 Question 7: "*Please provide evidence of the number of hunting trophies entering and leaving the UK, which species these are derived from and which animal parts they consist of or are made from (e.g. head, paws, skin)*"

Looking at the imports/exports to/from the United Kingdom and Northern Ireland (plus the Isle of Man, Gibraltar, Jersey, Guernsey) of the key species identified at paragraph 3.2 above, the following CITES Trade Database interrogation reveals some headline numbers.

However, when interrogating CITES trade database a number of anomalies are ever present – trade terms are often confused (for example is a hunting trophy a body and/or the skull, feet? – are the 'Claws', 'Skull' from the same dead lion, or are the 'Claws' taken from multiple dead lions?). So, it is hard, to be exact as to the number of dead animals/hunting trophies encompassed in the CITES trade data displayed.

Plus, there is a lag (of upto one year, or more) between events and entries on CITES trade database - hence exports and imports tallies never seem to match (or do not match due to other inaccuracies and/or anomalies).

Plus, there is the whole re-export potential to confuse the actual origin of any given specimen (ie. a lion shot in South Africa exported to Mozambique and re-exported to the UK, then exported again to the USA for example). Then there is the often misused source of 'Wild' to circumvent restrictions on any 'Captive' sourced exports/imports – eg. 'Captive' sourced lion trophies can be smuggled across the border from South Africa and exported as a 'Wild' sourced lion trophy into the USA from Tanzania (or elsewhere) to circumvent import restrictions. Or, the 'Captive' lion trophy exported to the UK to be re-exported in disguise to the USA as 'Wild' sourced, (or the lion skin hidden with another animal's skin in the hope it will not raise detection - reference paragraph 1.1.2).

3.3.1.1 African Elephant (Loxodonta Africana); 1998 – 2018 Imports to the UK

Today, the wild African elephant population is perhaps less than 400,000 (Chase et al. 2016) across the entire continent. This population is insufficient to reproduce and sustain that population level (Chase et al. 2016) whilst subject to the scourge of poaching for ivory (an estimated 30,000 elephants a year are slaughtered (Chase et al. 2016)), human-wildlife conflict and trophy hunting attrition.

The CITES trade database data indicates that for 'Tusks' [some in units, some in kg] – some 738 were imported into the UK between 1998 and 2018 (but some 1,500 reported as exported to the UK in the same period – a massive, unexplained anomaly).

Of those tusks exported to the UK, 1,095 'Hunting', 335 'Personal', 90 'Commercial', 15 'Educational', 4 'Scientific', 1 'Circus or travelling exhibition' 'Purpose' and 7 with no 'Purpose' given whatsoever. The 'Source' is predominantly (86%) 'Wild,' but some 'Confiscated or seized specimens' or 'Pre-Convention' specimens sources given (which may, or may not be true).

Clearly, trophy hunting is a way to obtain modern ivory and 'legally' import it into the UK, for potentially nefarious purposes. What UK based 'Circus or travelling exhibition' needs an elephant's tusk for example?

Source Data: CITES Trade Database

The imported figures to the UK are 'Bodies' - 1, 'Bones' - 33, 'Bone Carvings' – 32, 'Carvings' - 4,951, 'Ears' – 23, 'Feet' – 66, 'Hair' – 652, 'Hair Products' – 5, 'Ivory Carvings' - some 7,000 imported into the UK (some 14,500 exported to the UK in the same period), 'Ivory Pieces' [some in units, some in kg] – some imported into the UK (some 1,400 exported to the UK in the same period), 'Leather Products' – 152 imported into the UK (some 718 exported to the UK in the same period), 'Piano Keys' [some in units, some in kg, some in square feet, some in metres square etc.] – 414 imported to the UK (766 exported to the UK in the same period), 'Skin Pieces' – some 300 imported into the UK (some 1,928 exported to the UK in the same period), 'Skins' [some in units, some in kg, some in square feet, some in metres square etc.], 72 imported into the UK (some 122 exported to the UK in the same period), 'Skulls' – 9 exported to the UK, 'Specimens' [some in units, some in grams or kg] – some 2,000 imported into the UK (some 2,600 exported to the UK in the same period), 'Tails' – 10 imported into the UK (28 exported to the UK in the same period), 'Teeth' – 30 imported into the UK (6 exported to the UK in the same period), 'Trophies' – 51 imported into the UK (78 exported to the UK in the same period), 'Tusks' [some in units, some in kg] – some 738 imported into the UK (some 1,500 exported to the UK in the same period), 'Unspecified' – 18 exported to the UK.

3.3.1.2 African Elephant (Loxodonta Africana); 1998 – 2018 Exports from the UK

In the period 1998 – 2018, the UK exported some 32,000 'Carvings,' some 42,000 'Ivory Carvings,' 63 'Ivory Pieces.' - Note; some CITES trade database entries are in units, some in kg, so it's a slightly inconsistent and confused reference – 144 'Leather Products,' 8 'Skin Pieces,' 7,633 'Piano Keys' (all apparently 'Pre-convention'), 10 'Skins,' 1 'Skull,' some 12 'Specimens,' 3 'Teeth,' and some 70 'Tusks' (supposedly most being 'Pre-convention' source).

In August 2017, the Environmental Investigation Agency (EIA) announced "*UK is the largest supplier to the world's ivory markets*" – this study highlighted how much throughput there is of ivory pieces from the UK.

Of course, the UK Ivory Bill (2018) has since sought to curtail so much of this ivory trading, but what the bill does not cover is the obtaining of elephant hunting trophies and importing the resulting trophy/tusks/bodies/skulls etc. (including modern ivory) into the UK.

Therefore, it is vitally important to ban any such elephant hunting trophies into the UK and stop any misuse of such a loop-hole to obtain ivory by deceit – with the possibility such imports will be disguised not as recent, 'Hunting' 'Trophies' ('Tusks' etc.), but masked as 'Pre-convention,' or 'Personal' imports to cover the ivory importation – it is important to ban all such imports in the first place.

3.3.1.3 African Lion (Panthera Leo); 1998 – 2018 Imports to the UK

The number of lion hunting trophies legally imported into the UK is given below – following CITES trade database interrogation (including canned/captive-bred lion trophies, but the majority are 'Wild' sourced).

There are perhaps fewer than 20,000 African lions left in the wild – ending their attrition for hunting trophies is a priority (it is questionable if trophy hunting wild lions serves any conservation purpose in reality (reference paragraph 3.7.3.2). It is beyond doubt that canned/captive lions bred specifically as hunting trophies serves no conservation purpose whatsoever (reference paragraph 2.9.3).

Source Data: CITES Trade Database

'Trophies' – 196 in total, 122 'Hunting,' 14 'Personal,' 29 'Commercial' and 4 'unspecified,' 71 'Captive' source, 91 'Wild' source, 2 'Animals born in captivity that do not fulfil the definition of 'bred in captivity,'' 4 'Unknown' and 1 a 'Pre-convention' specimen apparently.

Other terms used to describe hunting trophies:

'Bodies' - 'Hunting' trophies imported into the UK - 2 'Captive' source from South Africa, 1 'Wild' source from Namibia;

'Claws' - 4 'Personal' 'Wild' source exported from South Africa, 10 'Hunting' source 'Captive' exported from South Africa;

'Skins' – 16 exported to the UK (7 imported) - 13 'Personal,' 3 'Hunting' from South Africa (including 2 re-export from Botswana), Kenya, Zimbabwe, Tanzania, 11 'Wild' source exported, 1 source 'Unknown', 4 'Captive' source;

'Skulls' – 20 exported (8 imported) – 1 'Personal,' 19 'Hunting' from South Africa (including 3 re-exports from Tanzania and 2 re-exports from Zambia), Mozambique, Tanzania, 15 'Wild' source, 5 'Captive' source.

3.3.1.4 African Lion (Panthera Leo); 1998 – 2018 Exports from the UK

Though exports are limited, any export still legitimises demand and fuels speculation for lion derivative products.

Source Data: CITES Trade Database Exports from the UK

The UK exported 7 'Trophies,' 4 'Skulls,' 13 'Skins,' 9 'Claws,' 3 'Bodies' (plus 29 'Live' specimens) – importers included the USA, Hong Kong, Canada, Uganda, Taiwan, Turkey, Poland, Malaysia, Macau, Mexico, Lithuania, Kenya, Jersey, Japan, Israel, China, Costa Rica, Switzerland, Canada, Australia and Anguilla.

3.3.1.5 Leopard (Panthera pardus); 1998 – 2018 Exports to the UK

Classed as "*Vulnerable*," (IUCN Red List), with a decreasing population trend (but there are no robust estimates of the total number of mature individuals range-wide), with leopards subspecies ranging across Africa and Asia.

One of the main factor for leopard declines in Africa is related to prey declines (medium and large-sized wild herbivores) and the unsustainable and increasingly commercialized bushmeat trade, leading to collapses in prey populations across large parts of savanna Africa (Lindsey et al. 2013b).

However, the ongoing persecution of leopards and trophy hunting attrition serve no recognisable conservation purpose in reality (reference paragraph 3.7.3.3), any import, or export of anything that could constitute a leopard hunting trophy should be curtailed.

Source Data: CITES Trade Database Exports to the UK

'Bodies' – 6; 'Bones' – 51 [units and some in kilogrammes]; 'Claws' – 29; 'Derivatives' – 50 (but, 1,720 reported as imported into the UK in the same period); 'Fur Product' – 0 (but, 2 reported as imported into the UK in the same period); 'Garments' – 4; 'Hairs' – 209; 'Leather Products' – 2; 'Live' – 10; 'Skin Pieces' – 6; 'Skins' – 96; 'Skulls' – 26; 'Specimens' – 896 [units, flasks and kilogrammes]; 'Tail' – 1; 'Teeth' – 0 (but, 1 reported as imported into the UK in the same period); 'Trophies' - 111

3.3.1.6 Leopard (Panthera pardus); 1998 – 2018 Exports from the UK

Source Data: CITES Trade Database Exports from the UK

'Bodies' – 4; 'Carvings' – 2; 'Claws' – 0 (but, 1 reported as imported from the UK in the same period); 'Derivatives' – 1 (but, 16 reported as imported from the UK in the same period); 'Fur Products' – 1; 'Garments' – 1 (but, 5 reported as imported from the UK in the same period); 'Leather Garments' – 9; 'Live' – 10; 'Rug' – 1; 'Skin Pieces' – 0 (but, 10 reported as imported from the UK in the same period); 'Skins' – 45; 'Skulls' – 5; 'Specimens' – 0 (but, 95 millilitres reported as imported from the UK in the same period); 'Trophies'

3.3.1.7 Common hippopotamus (Hippopotamus amphibius); 1998 – 2018 Exports to the UK

Classed as "*Vulnerable*," (IUCN Red List), with a stable population trend (115,000 – 130,000), where the primary threats to Common hippos are habitat loss or degradation and illegal and unregulated hunting for meat and ivory (found in the canine teeth), with massive (eg. upto 95% decline in the species at the start of the 21 century in the DR Congo) declines in population sizes due to human hunting attrition of the species (IUCN Red List, Threats).

'Legal' trophy hunting attrition can have a highly negative impact on the species (reference paragraph 3.7.3.4), with the increasing potential of hippos being targeted as hunting trophies to obtain ivory, therefore any import or export should be curtailed.

Source Data: CITES Trade Database Exports to the UK

'Carvings' – 10; ' 'Feet' – 29; 'Ivory Carvings' – 12; 'Ivory Pieces' – 3; 'Leather Products' – 89; 'Skin Pieces' - 9; 'Skin' – 92 [units, metres square]; 'Skulls' – 23; 'Specimens' – 8; 'Tail' – 1; 'Teeth' – 38 [units and kg]; 'Trophies'- 89; 'Tusks' – 64

3.3.1.8 Common hippopotamus (Hippopotamus amphibius); 1998 – 2018 Exports from the UK

Source Data: CITES Trade Database Exports from the UK

'Bodies' – 5; 'Carvings' – 146 [units and kg]; 'Ivory Carvings' – 3 (but, 48 reported as imported from the UK in the same period); 'Ivory Pieces' – 1 reported as imported in the same period; 'Leather Products' – 2 (but, 43 reported as imported from the UK); 'Skin Pieces' – 3 (but, 33 reported as imported from the UK); 'Skins' 619 [Units and metres square]; 'Skulls' – 3; 'Teeth' – 9 (but, 200 reported as imported from the UK); 'Trophies' – 8; 'Tusks' – 10 [units and kg]

3.3.1.9 Polar Bear (Ursus maritimus); Exports to the UK; 1998 - 2018

Listed as "*Vulnerable*" (IUCN Red List) population "*unknown*," with a population of perhaps 26,000 (IUCN Red List, Population). Threats include climate change, habitat loss, and unscientific harvesting (for subsistence/hunting trophies – reference paragraph 3.7.3.6):

> *".....harvest practices may have to be reconsidered given recent knowledge about long-term environmental trends and fluctuations that can affect sustainable removal rates. In some jurisdictions in Canada, the governance system includes aboriginal co-management boards and aboriginal hunting organizations. In some of these co-management systems, both local knowledge and science are to be considered equally in both management and research decisions"* - IUCN RED List, Threats

Source Data: CITES Trade Database Exports to the UK

'Bodies' – 4; 'Bones' – 2; 'Carvings' – 29; 'Claws' – 27; 'Garments' – 2; 'Live' – 1; 'Skin Pieces' – 158; 'Skins' – 69; 'Skulls' – 13; 'Specimens' – 426 [units with some in millilitres]; 'Teeth' – 2; 'Trophies' – 4; 'Unspecified' – 2

3.3.1.10 Polar Bear (Ursus maritimus); Exports from the UK; 1998 - 2018

Source Data: CITES Trade Database Exports from the UK

'Bodies' – 4; 'Garments' – 1; 'Skin Pieces' – 0 (but, 10 reported as imported from the UK for the same period); 'Skins' – 6; 'Trophies' – 0 (but, 5 reported as imported from the UK for the same period)

3.3.1.11 Southern white rhinoceros (Ceratotherium simum simum); Exports to the UK; 1998 - 2018

Classed as "*Near Vulnerable*" (IUCN Red List), the Southern white rhinoceros is fairing much better than its Northern relative (which is facing dire pressure to avoid extinction). The Southern white rhinoceros population is some 20,000 with 98% residing in South Africa. However, the species faces pressure from poaching (reaching levels in excess of 1,000 rhino

per year in South Africa) to obtain rhino horn to serve the Asian market for Traditional Chinese Medicines (TCM) encompassing rhino horn, as well as the horn being used for sculpting status symbols and ornaments in the Asian region. All this is despite a CITES international ban on rhino horn trading since 1977. Trophy hunting attrition is expanded upon at paragraph 3.7.3.5.

Source Data: CITES Trade Database Exports to the UK

'Bodies' – 0 (but, 1 reported as imported to the UK in the same period); 'Bones' – 1; 'Carvings' – 1; 'Feet' – 6; 'Horn Carvings' – 0 (but, 1 reported as imported to the UK in the same period); 'Horns' – 6 (2 'Pre-convention' Source apparently, but 4 'Wild' Source 'Hunting' Purpose); 'Leather Products' – 4; 'Live' – 19; 'Skin Pieces' – 2; 'Skins' – 5; 'Skulls' – 1; 'Specimens' – 3; 'Trophies' - 7

3.3.1.12 Southern white rhinoceros (Ceratotherium simum simum); Exports from the UK; 1998 - 2018

Source Data: CITES Trade Database Exports from the UK

'Carvings' – 1 ('Pre-convention'); 'Horns' – 1 ('Circus or travelling exhibition' Purpose, Source 'Unknown'); 'Horn Carvings' – 1 ('Pre-convention' Source).

3.3.1.13 Giraffe (Giraffa Camelopardalis); Exports to the UK; 1998 - 2018

This species was not listed in the CITES Appendices – but, the giraffe was uplisted after CITES CoP 18, thus enhancing (in theory) the species' protection from unregulated exploitation.

No CITES Trade Database Exports recorded to the UK

3.3.1.14 Giraffe (Giraffa Camelopardalis); Exports from the UK; 1998 - 2018

No CITES Trade Database Exports recorded from the UK

3.4 Question 8: "*Please provide any evidence to assist our understanding of the number of companies which are supported by the movement of hunting trophies between the UK and other countries*"

Not known.

3.5 Question 9: "*Would UK businesses be impacted by stricter controls on the import and export of hunting trophies and, if so, how?*"

The main impact on UK businesses of stricter controls on the import and export of hunting trophies would be to UK hunting outfitters supplying safari services to clients wishing to import any subsequent hunting trophy back to the UK, plus any UK taxidermists employed for UK based, or international clients (plus any shipping agents involved in the transit of said trophies etc.).

Despite the pro-hunting claims that their 'sport' has an overriding imperative motivated by conservation, the main concern of the trophy hunter often seems to be driven by the desire to obtain the trophy of the targeted animal(s).

Figure 5 - Hunting trophies

Restricting access to the trophy will potentially lead to trophy hunting demand reduction from UK trophy hunters for any restricted species, plus reducing the opportunity for UK businesses to act as a third-country conduit (ie. for taxidermy services to circumvent import restrictions in another country):

> "*A big motivation for most trophy hunters is shipping parts of the hunted animal (the "trophy") back home*" - Loveridge 2018, "*Lion Hearted*," page 94

However, there is no limit to the lengths to which some trophy hunters will go to gain access to the trophy itself, regardless of any restrictions – particularly if 'Personal' imports/exports of hunting trophies as one's personal possessions during a house move remains as a means for hunting trophies to change hands by mutual agreement.

If an all-encompassing Option three ban on the import and export of all hunting trophies is enacted, then this will have implications for the UK's own trophy hunting industry – namely stag/deer hunting in Scotland (reference paragraph 3.10) and the export of any resulting trophy from the UK.

3.6 Question 10: "*We are interested in finding out more about other countries' restrictions on trade, import or export of hunting trophies, or domestic restrictions on the practice of trophy hunting itself*"

Recent restrictions are summarised below – but the overriding feedback is that there has been no independent, peer-reviewed science that says any of these restrictions have had a negative impact on species' conservation due directly to a downturn in trophy hunting.

3.6.1 Australia

In March 2015, Australia banned the import and export of all lion hunting trophies, giving CITES Notification to all Parties, 19 March 2018. There have been no reported negative consequences for species' conservation.

Australia also gave notice (CITES Notification to all parties, 19 March 2018) stricter domestic trade measures for African elephants – treating all as though they are Appendix I listed without exemption, plus whales and dolphins (Cetacea) as if Appendix I listed.

3.6.2 China

China has brought in stricter (time limited) controls on the import of tusks obtained via trophy hunting (CITES Notification to all parties, 1 April 2016):

> *"…..import of tusks and ivory carvings of elephant (Elephantidae spp.) in the following forms will be suspended from 20 March 2016 to 31 December 2019:*
>
> *a) Pre-Convention tusks from elephant and its products;*
>
> *b) Ivory carvings of African elephant obtained after the Convention entered into force; and*
>
> *c) Tusks as hunting trophies obtained in Africa*

It is hoped that these restrictions will be extended beyond the 31 December 2019.

3.6.3 France

In 2015, France banned the import of lion hunting trophies. There have been no reported negative consequences for species' conservation.

3.6.4 The Netherlands

In 2015, the Netherlands' Minister for Agriculture, Sharon Dijksma made a very clear statement of intent:

> *"I feel that the poaching of ivory and rhino horn and other forms of trophy hunting are crimes that threaten biodiversity and the overall health of the natural environment. We need to work together in the international context to put an end to this despicable situation."*

In 2016, the list of species banned from import into the Netherlands was expanded to 200 – to include white rhino, elephant, hippo, cheetah, polar bear and lion.

There have been no reported negative consequences for species' conservation.

3.6.5 United States of America (USA)

The USA imposed restrictions on the importation of lion hunting trophies in early 2016 under the Endangered Species Act (ESA):

> *"In response to the dramatic decline of lion populations in the wild, the U.S. Fish and Wildlife Service (Service) today announced it will list two lion subspecies under the Endangered Species Act (ESA). Panthera leo leo, located in India and western and central Africa, will be listed as endangered, and Panthera leo melanochaita, located in eastern and southern Africa, will be listed as threatened"* - USFWS 21 December 2015

'Canned' hunting is in contravention of the guiding principle for importation to the USA "*…it is also imperative that the program* ['canned' hunting] *is part of a legally recognized governance system that supports conservation."* There is no evidence to substantiate any

credible theory that 'canned'/captive lion breeding (South Africa) supports conservation. Hence, it has become difficult to import 'canned'/captive lion trophies into the USA.

The USA is the largest hunting trophy importer in the world, including 'canned' lion trophies prior to 2016, hence the ban has had a significant financial impact on the South African 'canned'/captive hunting business:

> "*The majority of hunters visiting South Africa to hunt lions, nearly all of which are captive-raised, come from the U.S. According to SAPA the ban has resulted in a significant decline in the number of American hunters visiting the country*" - Born Free Foundation, March 2018 – "*Cash before conservation*"

In 2017, the USFWS announced the reinstatement (after introducing stricter African elephant hunting trophy import restrictions - CITES Notification to all parties, paragraph 2. f), 10 October 2014) of all elephant trophy hunting imports regardless of origin into the USA on the grounds that the department "*can allow the import of a sport-hunted elephant trophy only when the killing of the trophy animal will enhance the survival of the species*" – this statement has been widely disputed and the decision countermanded and put "*on-hold*" by the President. But in 2018, the restrictions were lifted on a case-by-case basis – but a USFWS memorandum (1 March 2018) does not make clear the criteria that will be taken into consideration when granting importation permits. The USFWS guidance remains opaque.

3.6.6 Kenya

Kenya, banned elephant hunting in 1973, with a complete ban on all hunting (without permits) from 1977 – reference paragraph 3.7.1

3.6.7 Botswana

Botswana has recently (2018) reinstated elephant trophy hunting (after a 2014 moratorium). However, this is considered a mistake by leading experts and will not help reduce human-wildlife conflict – reference paragraph 3.7.3.1. This has already been proven, with unethical hunting practices clearly evident in Ngamiland, where local elephants have been hunted - detrimental to elephant conservation with dominant bull elephants removed, thus opening

up local herds to delinquent behaviour and a reduced gene pool. Local Ngamiland communities were not informed of the hunting, do not benefit and are against the hunting in their area, which they say is likely to increase the potential of human wildlife conflict as the local elephant herds are negatively disrupted and angered by humans hunting with guns, thus endangering the local community that have previously co-existed with the elephants.

The main reason for reinstating trophy hunting in Botswana appears to be disgruntlement with the lack of income from hunting activities within some local communities. However, it must be stressed that income to local communities from trophy hunting does not equate to conservation of the target species per se. (reference paragraph 3.7.3.1).

A ban on trophy hunting in Northern Botswana revealed negative consequences on the communal economy in areas that were previously hunting grounds. According to one study, the revenue generated by hunting expeditions represented around two-thirds of total tourism income (Mbaiwa 2015). According to Mbaiwa 2015, the ban on trophy hunting also led to halting certain community-based natural resource management (CBNRM) programs due to loss of funding for these opportunities.

Therefore, careful consideration must be given to any transition away from dependence upon trophy hunting income trickle-down to local communities and/or community programs.

3.7 Question 11: "*Please provide evidence of the impacts of restrictions on trade, import or export of hunting trophies, or impacts of domestic restrictions on the practice of trophy hunting on: a) species conservation and natural environment*"

3.7.1 Kenya

What happens to species' conservation and the natural environment if trophy hunting is removed from a given host country/range state?

The obvious example here is Kenya, where elephant hunting was made illegal in 1973, with a complete ban on all hunting (without permits) from 1977. However, illegal poaching is still a major issue.

A BBC news article (entitled "*Mara Wildlife in Serious Decline*") from 2009 states clearly "*numbers of giraffe, warthog, impala, and hartebeest fell by 50% or more between 1979 and 2002*," citing evidence from a British Journal of Zoology report (Otuoma et al. 2009). The loss of grazing animals is already having an impact on lions, cheetahs and other predators according to the researchers.

Kenya is often cited by pro-hunting advocates as an example of the decline of trophy hunted species if trophy hunting is removed from the equation. However, the Congressional Research Service, 2019 (page 28) concluded that regarding Kenya:

> "*In some cases, the banning of hunting correlates with animal population declines. For example, in Kenya, which instituted a hunting ban in 1977, almost all the common wildlife species have declined from their previous levels since the ban to 2016. Concurrently, livestock numbers, notably sheep and goats, increased by 76.3% during the same period (Ogutu et al. 2016). Kenya's population increased from 14.5 million in 1977 to 48.5 million in 2016. Based, in part, on these data, scientists note that* ***demographic pressure and livestock encroachment on wildlife rangelands appear to be the decisive factors leading to wildlife declines in Kenya*** *(Ogutu et al. 2016)*."

The scientists who conducted the report (Otuoma et al. 2009) concur, that the surge in domestic livestock has been held largely accountable for the drop in wildlife populations – The three main causes that have been cited for the drop in wildlife numbers are illegal poaching, larger numbers and ranges of domestic livestock, plus changing land use patterns

on the ranches. There is no mention of 'trophy hunting' cited as a cause/effect for the decline in Kenya's wildlife since 1977 - the trophy hunter's 'claim' appears unsubstantiated.

In terms of poaching in Kenya, the 2005 BBC article ("*Lifeline for Kenya's 'lost' Wilderness*") the poachers shot the last of the black rhino in Sera over a decade ago. Elephant herds are now at levels of 20% compared with the 1970s. Lawlessness and armed poachers are still evident today, but heavily fortified wildlife areas are still managing to protect black rhino, lions and leopard also managing to 'survive' somehow.

So, is Kenya an example of what will happen if trophy hunting is banned within a country/range state? No, it is not. Kenya would seem to be an example of poor land management, poaching and wanton over-grazing, based on a culture where a man's wealth and social status is directly linked to owning large herds of cattle, which dominate the grazing available to the detriment of wildlife.

3.7.2 Namibia's Game Product Trust Fund (GPTF)

Countries that host trophy hunting can also put aside some of the income derived as a conservation fund. However, such funds do not always deliver all that is promised. As an example, let's look at Namibia's Ministry of Environment and Tourism (MET) Game Products Trust Fund (GPTF), which was started back in the late 90s.

The objectives of the GPTF are stipulated in Section 3 of the GPTF Act No. 7 of 1997, as follows:

> (a) "*to make grants to emerging conservancies and wildlife councils for the purposes of implementing and maintaining projects and programmes, approved by the Board in consultation with the Minister, regarding wildlife conservation and management and rural development*;
>
> (b) *to allocate funds, subject to the provisions of this Act, to conservancies, wildlife councils and protected areas, and to persons, organisations and institutions approved by the Minister, to be used by those conservancies, wildlife councils, protected areas, persons, organisations and institutions in connection with projects and programmes regarding wildlife conservation and management and rural development*;
>
> (c) *to support measures aimed at improving the relationship between people and wildlife*;" and

(d) "*to support improvements in the monitoring, management, protection, sustainable use and development of wildlife resources in rural areas*."

The GPTF remains somewhat secretive and shielded from public scrutiny, but an analysis in 2016 (IWB 2016c) revealed that the conservation merits of Namibia's GPTF appear limited:

1. Namibia's Game Products Trust Fund (GPTF) does not wholly fund conservation societies, but supplies funds for specific needs upon application - for example, upon application a conservation society might receive funding for two vehicles, but no conservation society is directly funded by GPTF on an on-going basis.

2. The majority of hunting income is accrued into the businesses of hunting operators and tour operators etc. The GPTF and MET do no accrue significant income from hunting in comparison; (IWB 2016c Table 4) - "*Total Trophy Hunting Income*" estimated at some $32.8m USD, whereas IWB 2016c Table 1 - "*Total Income (GPTF)*" for 'conservation' purposes, was just $632k USD, or less than 2% of the "*Total Trophy Hunting Income*." Of that $632k USD income for conservation, only $390k USD was spent in 2011/12, so less than 1.2% of the "*Total Trophy Hunting Income*." This looks like a very poor 'conservation' return based on the numbers available for analysis.

3. Note: It is safe to assume that general taxation on hunting and tour operators' business income is accrued to general Government taxation.

4. "*Wildlife Parks and Management*" received expenditure of N$163m (2012/13) (£7.12m GBP, $10.23m USD) from the MET accounts, but that Revenue/Expenditure accrues from all of MET's sources - In 2012/13 MET's Total Revenue was N$52m (£2.29m GBP, $3,26m USD), of which hunting contributed (IWB 2016c Table 2) N$1.22m (£54k GBP, $70k USD), or just 2.3%. The largest contributor was "*Park Entrance Fees*" making up 87% of MET's Revenue in 2012/13.

5. If Namibia's GPTF is still in significant surplus (IWB 2016c Table 1), then why the need to maintain/increase such high hunting quotas? Why the need to take money to execute Black rhino for example?

6. Namibia enjoys a reported general tourism income of $517m USD per annum (IWB 2016c Table 4), compared to just $32.8m USD per annum from Trophy Hunting. Why not use some of the substantial general tourism income to support conservation and negate the claimed 'need' for trophy hunting quotas of all precious species, especially rhino? General tourism might actually increase as a result.

7. Namibia's Gross Domestic Product (GDP) was $12.99bn USD (2014 - short scale billion). So a total estimated hunting income of some $32.8m USD per annum (IWB 2016c Table 4) represents just 0.2% of Namibia's 2014 GDP.

In conclusion, as an example, Namibia's GPTF does not equate to significant accumulation of conservation funds/spend. Hence, the loss of trophy hunting income (through restrictions on trade, import or export of hunting trophies) input into Namibia's GPTF and hence any conservation funding would appear to be minimal.

3.7.3 Trophy Hunting – Species Case Studies

Trophy hunting covers a vast spectrum of wildlife attrition – it is impossible to analyse it all within the confines of this submission to the DEFRA consultation process. Therefore, some brief case study examples are given below, with read-across to the whole trophy hunting industry.

DEFRA, November 2019, paragraph 40 states that the four species of which trophies are most commonly imported to the UK are African elephant (*Loxodonta africana*), lion (*Panthera leo*), leopard (*Panthera pardus*) and common hippopotamus (*Hippopotamus amphibius*), plus the additional EU Wildlife Trade Regulations, species in Annex B subject to stricter restrictions, Polar Bear (*Ursus maritimus*) and Southern white rhinoceros (*Ceratotherium simum simum*).

So, let's look in detail and these species' case studies. Does trophy hunting attrition/management appear to be motivated upon conservation and/or deliver any recognisable conservation? If not, then will the impact of any restrictions on trade, or import of hunting trophies negatively impact species' conservation?

The answer seems to be that conservation of species is not a key deliverable of trophy hunting, but the practice is used as an income stream and a means to provide local communities with subsistence/welfare (which does not necessarily correlate with species conservation per se., via guaranteed reduced human wildlife conflict).

3.7.3.1 African elephant (Loxodonta africana)

Back in the early part of the 20th century, there may have been as many as 3 - 5 million elephants.

Today, the wild African elephant population is perhaps less than 400,000 (Chase et al. 2016) across the entire continent. This population is insufficient to reproduce and sustain that population level (Chase et al. 2016) whilst subject to the scourge of poaching for ivory (an estimated 30,000 elephants a year are slaughtered (Chase et al. 2016)), human-wildlife conflict and trophy hunting attrition. Therefore, without intervention, the African elephant population is doomed to carry on declining towards extinction in the wild.

The IUCN Red List categorises the African elephant as "*Vulnerable*" but somehow suggest the species' population is increasing (at 4%, 15,000 elephants in some regions – but this is based on 2005 – 2007 studies, which are superseded by Chase et al. 2016).

CITES (Species+) lists the African elephant at Appendix I, but with exemptions for the populations of Botswana, Namibia, South Africa and Zimbabwe, which are included in Appendix II subject to annotation 2 – with recent annual, ongoing trophy hunting quotas set as follows (a total of some 903 elephants per annum):

> 2019 - Namibia, 90 elephants (180 tusks); Tanzania, 50 elephants (100 tusks);
>
> 2018 - Mozambique, 33 elephants (66 tusks); South Africa, 150 elephants (300 tusks); Zimbabwe, 500 elephants (1,000 tusks).
>
> 2017 – Cameroon, 80 elephants (160 tusks).

The EU (Council Regulation (EC) No 338/97, EC 20 January 2017) listed this Annex B species for restrictions (similar to Annex A measures, except for the populations of Botswana, Namibia, South Africa and Zimbabwe, which are included in Annex B), with the intention to address the potential negative impacts of trophy hunting on the species (DEFRA, November 2019, paragraph 27.)

Botswana announced a return to elephant trophy hunting in 2019, with an annual quota of around 400 elephants (800 tusks) – the conservation benefits of such a move are not transparent as human wildlife conflict is unlikely to be mitigated. Perhaps this retrograde step is being driven by a need to reinstate past subsistence income to local communities (reference

paragraph 3.8.2) and compensate for human-wildlife conflict in the absence of mitigating expenditure.

The killing of an elephant as a hunting trophy does not mean that any given community will not be subject to ongoing conflict with other elephants that encroach on the community's land and resources.

Let's look at the reasons elephants have expanded their ranges in Botswana (and increasing human wildlife conflict resulting) with Dr Mike Chase, Elephants Without Borders (EWB):

> "*i. Density dependent dispersal – search for food*,
>
> *ii. Failure of the Kavango-Zambezi TFCA. Poaching and habitat constriction in southern Angola, Zambia and along Botswana's borders have restricted elephants to remain in the safety of Botswana,*
>
> *iii. Water availability in the form of artificial water and recent flooding events in previously dry rivers have enticed elephant to move further south, and*
>
> *iv. Vet fences are effective barriers to elephant movements, but many of them have not been maintained and long stretches are broken giving elephants access to new areas.*
>
> *"In all likelihood, the reintroduction of trophy hunting will have no impact on any of these factors as they are unrelated to the ban on trophy hunting in 2014*" – Chase, M., 2018 - "*Arguments for lifting the ban are unsound*"

The funding (from whatever source) of appropriate mitigating action is the key, but the preference is for funds that are not derived from consumptive wildlife attrition.

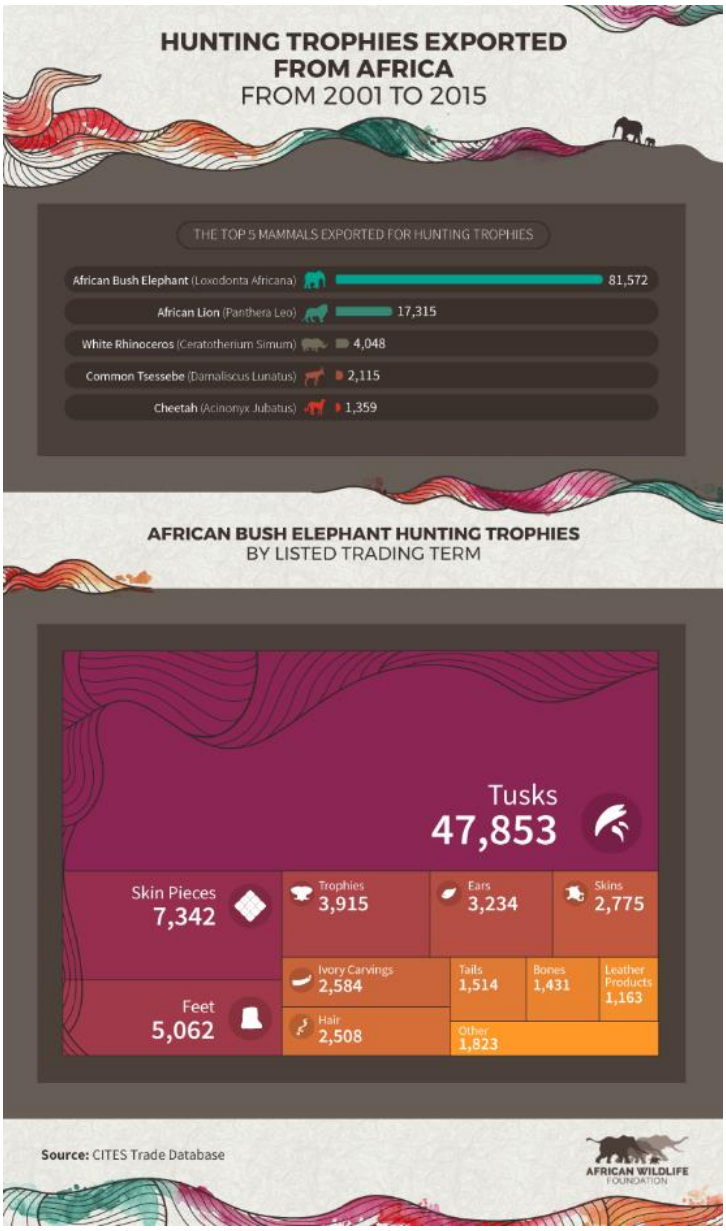

Figure 6 - "African Mammal Trade – A Look at the African Animal and Animal Product Trade," African Wildlife Foundation, October 2017

The African Wildlife Foundation estimates that between 2001 – 2015 some 81,572 African elephants were killed for hunting trophies – far more elephants were killed for trophies than the next most persecuted trophy hunted species in the list, the African lion ("*Vulnerable*") at 17,315 trophies for the same period (reference paragraph 3.7.3.2). The cheetah (*Acinonyx*

jubatus) has an estimated wild population of just 6,674 (IUCN Red List as "*Vulnerable*" and CITES Appendix I listing), but the cheetah is still trophy hunted in Namibia and Zimbabwe (with a quota of 150 and 50 respectively), but the species is persecuted throughout Africa as a 'problem' animal when hunting on, or near game farms. The Common tsessebe (*Damaliscus lunatus*) is considered "*Least Concern*" (IUCN Red List) and is a common species on game ranches. The White rhino (*Ceratotherium simum*) is IUCN Red Listed as "*Near Threatened,*" and CITES Appendix I with exemptions (reference paragraph 3.7.3.5).

At an estimated average $15,000 USD per elephant hunting trophy multiplied by 81,572 elephants, that's an income of some $1.224bn USD (or some $87m USD per year). The Congressional Research Service (2019) states at Table 1 that the average fee established from nine hunting outfitters is now at $45,013 USD for an elephant (which would equate to some $3.67bn USD derived from the trophy hunting of 81,572 elephants, or some $262m USD per year).

Figure 7 - "Sport hunting in Zimbabwe is big business, with hunters such as David Barrett paying $10,000 for the experience. Barrett, who is British, and others argue that Western hunters provide vital revenue to local communities" – National Geographic

Yet even this year, elephants are still dying in the wild from an historic lack of conservation investment, such as avoidable lack of water and food, because the drilling of long promised bore holes has yet to happen in drought regions in Zimbabwe and Botswana. So where is the conservation funding/spend to deliver conservation of elephants from the conservatively estimated $1.2bn USD gained from trophy hunting elephants between 2005 - 2015?

Interrogation of CITES' trade database reveals (trade terms for trophies, skulls, tusks, bones etc.) that between 2001 and 2016[Notes 2 and 3] the following African elephant 'parts' were purchased for import into the UK:

- some 386 'tusks' (54 'trophies' - 108 tusks, plus 278 'tusks');
- 9 'skulls'
- 26 'skins'
- 134 'skin pieces'
- 11 'carvings'
- Some 700 'ivory carvings' (most listed as 'P - personal' but also some as 'H – Hunting trophies')

Note 2 – Entries to CITES' trade database are always at least a year behind, so it is not yet possible to see any entries for 2017.

Note 3 - All these were from wild (source 'W') African elephant origins exported to the United Kingdom (and also Jersey) as hunting trophies (including under the often used disguise of 'personal' exports/imports).

The UK has clearly (and continues, reference paragraph 3.3.3.1) to play a role in importing elephant hunting trophies. There is a lack of scientific evidence that elephant trophy hunting either mitigates human wildlife conflict, or conserves the species.

If ivory worship within UK borders and all trade in ivory further restricted (the UK Ivory Bill 2018 (IWB 2018)), then the loop-hole of ivory imports into the United Kingdom under the disguise of 'legally' obtained purchases of 'hunting trophies' and 'personal' items also needs to be addressed/eradicated. Trophy hunting does not help the elephant species (IWB 2015a, Economists at Large 2013, IWB 2016b, National Geographic 2015).

3.7.3.1.1 What Does an Elephant Trophy Hunt Actually Look Like?

Let's look at the killing of rare, Namibian desert elephants and the resulting conservation (or lack thereof) resulting from the trophy hunting of this sub-species of African elephant.

In 2017, despite international outcry, permits were issued for two of the only five remaining mature desert elephants bulls that occupied the Ugab region of Namibia. Initially, a trophy hunting permit was issued for a "*problem elephant*" (supposedly an option of last resort) named *Kambonde* – a small 18 year old bull elephant.

However, on the day of the hunt, the trophy hunter thought *Kambonde* was too small (no doubt wanting his/her elephant trophy to be bigger and more impressive, not for any conservation, or sympathetic reasons no doubt).

Therefore, a second permit was issued to satisfy the trophy hunter's 'needs' by the Namibian Ministry of Environment and Tourism (MET), for *Tsaurab*, a desert elephant affectionately known for his meek and gentle character and one of only two young breeding adult bulls in the region. However, the MET continued with the hunting permit for *Kambonde* anyway*:*

> "*The elephant had to be shot eight times after the hunter just wounded it with the first shot. The MET warden present at the hunt had to apply the coup de grâce, or mercy kill*" - Namibian desert elephant, *Kambonde* – "*…the animal's death was a bloodbath*" – "*Questionable killing of Namibia's desert elephants*," Africa Geographic, 25 October 2017

Following the hunt, the MET tried to reassure "*all international followers*" by hiding behind the oft used pro-hunting mantra that they "*have created platforms that incentivise communities to co-exist with wildlife.*" As is evident in the case of *Kambonde*, however, no 'co-existence' effort appears to have been considered, despite the relocation of *Kambonde* option put forward by the community itself as a solution (so the killing of the so-called "*problem elephant*" was not a last resort). In the end both *Kambonde* and *Tsaurab* were killed for hunting trophies, with no plausible conservation justification anywhere to be seen.

This example of elephant trophy hunting demonstrates that trophy hunting often hides behind well-worn excuses but in reality, delivers anything but any recognisable conservation.

Trophy hunting income trickle down to local communities, or Namibia's Game Product Trust Fund (GPTF) (reference Namibia's GPTF at paragraph 3.7.2) is not a panacea - it does not provide a guaranteed solution to human-wildlife conflict.

3.7.3.2 *African Lion (Panthera leo)*

> *"[African] lions are in crisis. Because lions are uniquely visible to tourists there is a false impression that they are not endangered. The opposite is true: they are disappearing in plain sight. From an estimated population of 200,000 across Africa a century ago, and 30,000 a decade ago, as few as 20,000 lions may now roam free in the entire continent. Their numbers have been devastated by loss of habitat and wild prey, poaching, conflict with farming communities, unsustainable legal hunting, and emerging threats including the use of lion bones in traditional Asian medicine. Lions are being killed daily in Africa*" - *"Lions in trouble....", WildCRU, 27 October 2015*

Despite the African lion's steep population decline, the species is still only listed as CITES Appendix II, despite other species, which have larger species populations, such the African elephant, or similar species populations, such as the White rhinoceros, both being listed at Appendix I (with exemptions).

Panthera leo is only listed as "*Vulnerable*" in the IUCN Red List, with the "*Threats*" listed including:

> "*…….trophy hunting has a net positive impact in a some areas, but may have at times contributed to population declines in Botswana, Namibia, Tanzania, Zimbabwe (Packer et al. 2009, 2011, 2013), Cameroon (Croes et al. 2011) and Zambia (Rosenblatt et al. 2014).*"

Is the reluctance to uplist the African lion to Appendix I (or IUCN Red List as "*Endangered*" or above) because the African lion is such a popular income generator as a hunting trophy?

The EU (Council Regulation (EC) No 338/97, EC 20 January 2017) listed this Annex B species for restrictions (similar to Annex A measures), with the intention to address the potential negative impacts of trophy hunting on the species (DEFRA, November 2019, paragraph 27.).

Lion trophy hunting is conducted in a number of range states, so the evidence given within the confines of this consultation can only be a snap-shot. A 2015/2016 assessment of African lion hunting quotas is given at Appendix 2 for reference, but such quotas and how they are set remains opaque and removed from public scrutiny.

The African Wildlife Foundation estimates that between 2001 – 2015 some 17,315 African lions were killed for trophies (1,236 per year) – with only perhaps 20,000 African lions left in

the wild, then extinction clearly looms for the species as a direct result of trophy hunting attrition.

There is compelling evidence of declining numbers in key target species, such as the African lion, which poorly managed trophy hunting has not helped to improve across vast swathes of hunting concessions. The claimed "*conservation*" by killing is clearly not working, but has put a market value on every target animal's head – the hunting industry has succeeded in turning wildlife into a commodity and price it accordingly, as do poachers who also seek to profit by killing by other means.

If "*well managed*" trophy hunting was indeed a virtuous circle as advocated by Craig Packer ("*Lions in the Balance*" 2015) then perhaps the hunting industry's claims would hold more weight. But most hunters are seemingly driven by self-interest and just want to shoot, ably supported by hunting outfitters driven by short term self-interest, which in turn are 'licensed' under a 'legal' umbrella rife with corruption, short termism and greed – hardly a recipe for successful 'conservation' of anything, except human self-interest (IWB 2016a).

The main outcome is large tracts of land conserved for hunting iconic species where hunting quotas are not based on science, but based upon virtually 'unknowable' (IWB 2016a) target species population references and/or vague criteria for target selection to help 'conserve' the target species.

As the House Committee on Natural Resources 2016 report puts it:

> "*As a result, it is difficult to confidently conclude that any particular trophy import would enhance the survival of a species*" - "*Missing the Mark – African trophy hunting fails to show consistent conservation benefits, page 21*"

With the African lion used as an example, the empirical data points to undeniable species' population decline, as for many iconic, target species.

There has been an attempt to ensure 'minimal' impact on a given lion pride's dynamics from lion trophy hunting. However, a 6 years of age limit assumes the age at which a male lion holds a senior rank (tenure) within a pride is 4 years of age, with 2 further years of reproduction. This assumption has been challenged in studies (Nicholls et al.), which concluded that pride tenure can extend to lions of a mean age of 7.8 years.

In July 2015, Cecil was a pride male, in his prime with his off-spring in the pride. Cecil was 13 years old – so the assumption of a pride male's tenure appears at best to be subjective. Cecil

was lured (baited, so not a "*fair chase*" hunt) to his death in a bereft hunting concession from the protection of Hwange National Park, Zimbabwe by an American trophy hunting dentist, Walter Palmer (and 'Professional Hunter' Theo Bronkhorst).

Plus, the ability to accurately age lions in the field and the penalties for not doing so accurately have no correlation to any post-kill penalties for the hunting party. The only real penalty is depleting the gene pool and hindering real conservation of the species – an under-age lion is dead regardless of any genuine ageing mistake and/or financial penalty imposed on the hunting party post-kill etc.

The feasibility of determining any lion's age from distance, in the field is incredibly unreliable (Loveridge et al 2009), particularly the 'recommended' method to hunters and their guides of using a lion's nose colouration as a key indicator of age (Whitman and Packer 2006). Aging error in the field using a target lion's nose pigmentation as the key indicator is a problem (Caro et al. 2009; Whitman et al. 2004).

Therefore, any such criteria espoused to try to improve the regulation of lion trophy hunting tends to fall down in reality, the penalties for non-compliance are just not sufficient motivation.

If we explore deeper into specific lion range states that host trophy hunting, we can also see the flaws in any notion of 'well-regulated' trophy hunting:

> "*…it is not always clear that the locations where trophy hunting takes place are even financially viable themselves. For example, Lindsay et al. (2012) studied the effect of restrictions on lion hunting on the amount of land where trophy hunting would remain commercially viable across Mozambique, Namibia, Tanzania, Zambia and Zimbabwe. While the study showed that a total ban on lion hunting across all the studied countries would reduce the viability of trophy hunting industries in 14% of the current hunting areas, and a reduction in offtake to previously estimated sustainable levels would reduce viable areas of hunting by 2%, the more interesting finding was that even under existing regulations, trophy hunting was financially viable in only 56% of the total area in which lion hunting was undertaken (Campbell, 2012). This suggests that across 44% of the land used for lion hunting, alternative wildlife uses (like non-consumptive tourism) would be more economically sustainable than trophy hunting. Why trophy hunting persists at all in these areas is more likely to be a product of political and social pressures, rather than economic ones*" - Economists at Large 2017

3.7.3.2.1 Tanzania – Lion Trophy Hunting

Selous Game Reserve (SGR), the most important trophy hunting destination in Tanzania – Brink et al. 2016 highlighted the negative impacts that trophy hunting has had on the lion populations:

> *"The primary threats to large felids across Africa are thought to be retaliatory killing and habitat loss (Riggio et al. 2012, IUCN 2006, IUCN 2008, Fitzherbert et al. 2014). However, over-hunting is also a possible cause of concern, especially in felid species like the lion where infanticide is common (Caro et al. 2009, Whitman et al. 2004)"*
>
> Furthermore, the suggestion is that "*only recently*" (really?) "*has enough evidence been gathered to suggest….."*:
>
> *"……that trophy hunting of lions is having a negative impact on populations (Packer et al. 2011, Packer et al. 2009, Loveridge et al . 2007, Kiffner et al. 2009). Lion trophy hunting specifically targets adult males and sport hunters are extremely efficient in locating their quarry. This has large impacts because the males that replace the hunted individuals in the pride kill any cubs they have not fathered (Packer et al. 2011). Recent research from Zambia suggests that lion trophy hunting could be sustainable* ***with a strategy that combines periods of recovery or no hunting****, a minimum age of at least seven years for trophy lions, and a quota of 0.5 lions per 1000km^2 (Creel et al. 2016). Similarly, research from West Africa suggests a quota of 1 lion per 1000km^2 would be sustainable (Bouché et al. 2016)"* – if 'hunting is conservation' (sic) as claimed by the pro-hunting advocates, then why is "*no hunting*" recommended as a means of recovery from the hunting attrition (Creel et al. 2016)?

Figure 8 – A Sample of Under-aged Male African Lions Shot by "Sport Hunters" in Various Countries from 2004–2008 - Packer et al. 2009

In Katavi, Tanzania the estimated lion numbers were recorded as zero in 2014, from a population of 1,118 in 1993 (UNEP, 2015). It should be noted, that from 2010, 41 adult males (less than five years old) had been "*harvested*" for trophies in Katavi. Could this excessive trophy hunting of young male lions have been the end of the Katavi sub-population?

> "*Trophy Hunting was reported to have contributed to population declines outside of (and within some) protected areas of Tanzania (Lindsey et al. 2013) and was considered by Packer et al. 2011 to pose the greatest threat to the populations in Trophy Hunting areas*."

Chardonnet (IUCN 2019b) found that of the big game hunting zones in Tanzania, 72% are now classified as "*depleted*" and useless to hunters, containing no game species. In hunting areas in Tanzania that still contain lions, despite a six-year minimum age limit, in 2015, 66.7% of the lions shot were five years old or under. There were simply no lions of the correct age left to be shot.

3.7.3.2.2 Zimbabwe – Lion Trophy Hunting

In August 2019, a male lion (11 years old), Seduli was lured from the protection of Hwange National Park, Zimbabwe to be executed for a hunter's trophy needs - the hunt allegedly provided by South African outfitter, Chattaronga Bow Hunting Safaris. The trophy hunter is alleged to be the "*infamous*" Colton Payne from Huston, United States of America, who bow hunted a two year old lion in 2018 within Hwange.

Seduli was in a coalition with another male lion, Mopane, with both lions frequently seen by photographic safari lodges in and around Hwange National Park, Zimbabwe.

How does luring another healthy male lion to its death from a photographic tourism area support the hunters' claims that their 'sport' conserves lion habitat not suitable for photographic tourism? Instead, these noble hunters seem to lure lions from protected parks into depleted hunting concessions, depriving the lion gene pool within the targeted park - Seduli was not 'old and weak' but a fit and healthy specimen it would seem.

As further examples of Hwange national Park's depletion, "*69 out of 100 males were estimated to have died from age-independent causes in Hwange, and will continue to do so if estimated death rates remain unchanged. This means these males do not die of old age. The most likely cause of death is to be killed by trophy hunters or local farmers protecting their herds*" – WildCRU, "*David Macdonald explains that Cecil's death was part of a much wider story,*" Dr Andrew Loveridge, Professor David Macdonald and Dr Julia Barthold, 23 February 2016.

Based on the finding that too many lions were dying in Hwange of unnatural causes, when lion trophy hunting was suspended (after Loveridge's pleading with Zimbabwean authorities) from 2005 to 2008/2009 in north-western Matabeleland, including Hwange, positive conservation benefits resulted:

> "*With a temporary ban on hunting, we went from a situation in Hwange in which any male lion leaving the national park was in danger of being indiscriminately shot to one in which adult lions were relatively safe. Because male lions were now living much longer, with the survival rate of males increasing to more than 80%, there were many more males in the population….The structure of the [Hwange] population was beginning to look much more like those seen in well-protected national parks like the Serengeti or Kruger….we were starting to monitor the recovery of the lion population*" - Loveridge 2018, "*Lion Hearted*," pages 100 - 101

It should be noted that largest increase in Zimbabwe's lion sub-populations noted by WildCRU's research (2016) "*was in Gonarezhou, the nonhunted population, which had a 7,900% increase..,*" the "*lowest level [of lion sub-population increase] was in Hwange [where trophy hunting attrition persist]*"

Where is the independent, peer reviewed science that says the hunters' attrition (seemingly endorsed by Zimbabwe National Parks and Wildlife Management Authority) is sustainable at Hwange, or is this killing of Seduli just about the income again with no recognisable conservation credentials/imperative whatsoever?

3.7.3.2.3 Zambia – Lion Trophy Hunting

On 10th January 2013, a moratorium on safari hunting was imposed across 19 hunting blocks, with a recommendation to maintain the ban until at least 2016 to allow populations to recover (Midlane (Lindsey) et al. 2013, Rosenblatt et al. 2014).

Trophy hunting was the primary cause of death in Zambia's South Luangwa landscape between 2008 and 2012, with 46 males harvested (Rosenblatt et al. 2014, WildCRU 2016).

The Zambian Government reintroduce lion trophy quotas for 2016/17, with the ban lifted on 10 May 2015 (despite opposition voiced in the relevant Parliamentary debate). Fixed quotas of 60%, regardless of "*offtake*" (which encourages over-hunting) was the Zambians Government's proposed approach, with the actual concession quota (74 in 2012) based on a very optimistic and unsubstantiated estimate of a total population of 1,500 to 2,500 lions (no evidence was provided to UNEP-WCMC to support this optimistic assessment. The IUCN has a 2014 estimate of approximately 510 lions).

Zambia had (upto 2016) no minimum age of "*offtake*" known to be stipulated in its hunting laws and guidelines. So, the hunting and killing of male lions of any age will have a potentially devastating effect on individual pride and sub-population stability.

The real fear is, the "*offtake*" of 40 plus male lions could completely decimate the entire population if the 'real' total lion population in country is closer to 500 lions, rather than the Zambian Government's optimistic 'belief' of up to 2,500.

Is Zambia's approach responsible, 'legal' hunting that has any potential benefit for conservation? Regardless of Zambia's lack of evidence to support the lifting of the safari

hunting moratorium for the 2016/17 season, will this potential lack of 'conservation' concern the average trophy hunter, or hunting association such as Safari Club International? I suspect they will claim it's 'legal,' 'responsible' and 'conservation'- anyone that objects must be an "*ignorant-anti*."

3.7.3.3 Leopard (Panthera pardus)

Concerns were raised in 2009 over the sustainability of leopard trophy hunting in South Africa by Balme et al. 2009. According to scientists, high rates of trophy hunting have caused population declines in many sepecies, including possibly African leopards (*Panthera pardus*) (Packer et al. 2009).

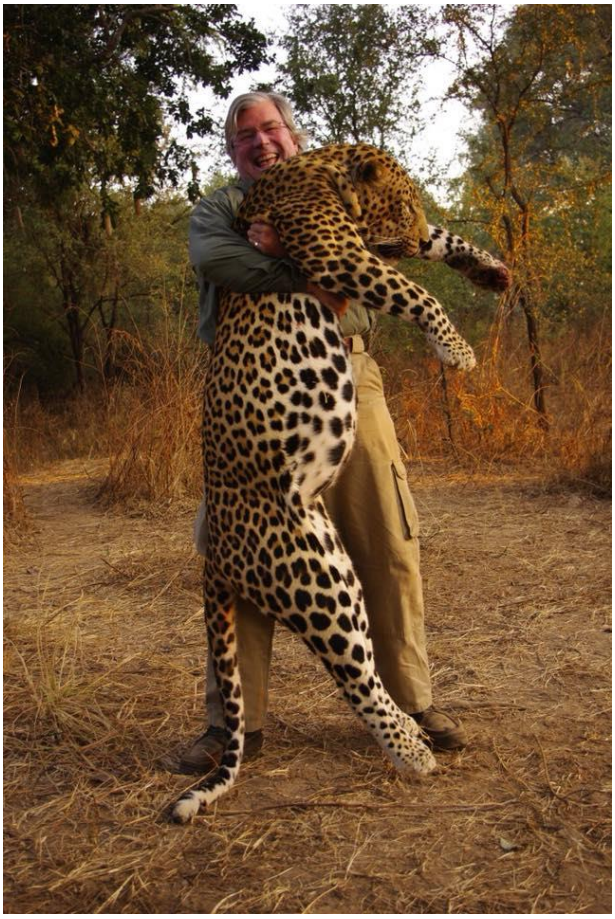

Figure 9 - Trophy hunter with leopard

The IUCN Red List (*Pathera pardus – "Vulnerable"*) with a decreasing population tend – "*there are no robust estimates of the total number of mature individuals range-wide*."

The IUCN considers the leopard population within "*South Africa appear to be decreasing from previous estimates with Leopards disappearing from areas with increased human development and areas of intensive conflict with humans.*" Furthermore, Swanepeol et al. 2014 stated that "*we found an unequivocal risk of population decline in South Africa as a whole as well as for several provinces."*

CITES lists the African leopard at Appendix I – with annual, ongoing hunting quotas as follows:

> 2019 - Democratic Republic of Congo, 5; Ethiopia, 20; Namibia, 250; Tanzania, 500;
>
> 2018 – Kenya, 80; Malawi, 50; Mozambique, 120; South Africa, 150; Uganda, 28; Zambia, 300; Zimbabwe, 500;
>
> 2017 – Botswana, 130

This species is listed under Annex A of the EU (Council Regulation (EC) No 338/97, EC 20 January 2017).

It is estimated that between 2004 and 2014, more than 10,000 leopard trophies have been exported from Africa – CBTH 2019, despite the species' population being unknow.

In January 2016 the Republic of South Africa, Department of Environmental Affairs (DEA) set a zero leopard hunting quota across all provinces (then extended the zero quota through 2017). The DEA accepted the negative non-detrimental finding (meaning it found hunting to have a detrimental effect) to hunt leopards from 2016:

> Balme also reportedly said at the time in 2016 "*We just don't know how leopards are faring in South Africa. They're secretive, mainly nocturnal, solitary and range over huge areas. Counting them requires intensive research using expensive technology such as camera traps, which can only be deployed over small areas, far smaller than the areas in which hunting quotas are determined*" - "*South Africa bans leopard trophy hunting for 2016*," *Africa Geographic,* 25 January 2016

But since 2018, a leopard hunting quota has been re-established with South Africa, though in reality the leopard trophy hunting persecution (Friedmann et al. 2008) never stops even when there is a moratorium on trophy hunting, with many leopards designated as 'problem animals' so a permit could be obtained (and sold on) for trophy hunting purposes.

Williams, S.T. et al. 2017 study "*Population dynamics and threats to an apex predator outside protected areas: implications for carnivore management*":

> "*…..calls into question the sustainability of additive off take through legal mechanisms of leopard removals such as trophy hunting and damage-causing animal destruction permits.*"
>
> Furthermore, the report continues *"trophy hunting of large carnivores can be associated with elevated levels of human–wildlife conflict and increased mortality from persecution*." This persecution is "*often in retaliation to perceived [...leopards cause less livestock damage than farmers perceive....] livestock predation or for bushmeat, and this may be driving steep declines in the leopard population*"
>
> "*It is estimated that as many as 1500 – 2500 leopards are illegally harvested annually to meet the demand for skins by the Nazareth Baptist 'Shembe' Church; The illegal killing of putative DCAs* [Damage Causing Animals, as self determined by livestock farmers in their illegal 'shoot, shovel and shut up' approach to leopards] *is typically indiscriminate, the scale of which is currently unknown since illegal off-take of leopards is poorly monitored, if at all" – "Leopard Quota Review: South Africa"* (AC30 Doc 15. Annex 3), Para 3.e. *"Illegal Off-take," September 2018*

There is clearly bias towards commercial endeavours and the pro-hunting fraternity when it comes to leopard hunting quota setting, using old, extrapolated data, or just made up numbers to support the notion there are "*plenty left to kill*" (sic):

- Extrapolated data - South Africa's 2017 proposals for reintroducing leopard hunting quotas were based upon 'leopard densities' extrapolated from data first established in 1972 (that has no realistic correlation with any current scientific certainty);

- *"Plenty left to kill"* - evident in 2011 when in partnership with a pro-hunting lobby group, Safari Club International (SCI), Namibia launched a census "*to manage the sustainability of the leopard population*." The limited returns from the farmers' census were extrapolated, producing a flawed national estimate of leopards of over 14,000 leopards – giving the notion that there were 'plenty left to persecute/kill.' The reality is leopards are a shy and elusive species, there is no feasible means to accurately estimate the population, let alone such a high estimate to justify the killing. Namibia has a CITES trophy hunted export quota of 250 leopards per year, a questionable

figure, according to experts of the International Union of Conservation of Nature (IUCN), because it is based on "*insufficient ecological information and lack of scientific data*."

It should be noted that SCI and its ilk, promote leopard trophy killing as a badge of honour, not as any scientifically proven, altruistic endeavour, but encourages the taking of leopards and other big cats as a 'must have' for any worthy hunter seeking peer group acceptance/recognition.

Does any of the above contortions of 'so-called' science-based hunting quota setting seem as if the motivation is conservation of the target species, or to perpetuate the persecution for commercial purposes and the trophy hunters' obsession?

3.7.3.4 Common hippopotamus (Hippopotamus amphibius)

The hippopotamus species (*Hippopotamus amphibius*) is classed by the IUCN Red List as "*Vulnerable*," with a "*Stable"* estimated global population of around 115,000 – 130,000. But threats such as illegal hunting (for meat) and the illicit supply of hippo canine teeth as a source for ivory are among the many threats this species faces:

> "*A 1994 assessment by TRAFFIC, the monitoring agency of international trade for the IUCN, reported that illegal trade in Hippo ivory increased sharply following the international elephant ivory ban in 1989*" – IUCN Red List

> In a 2017 study (Anderson et al. 2017), "*Missing teeth: Discordances in the trade of hippo ivory between Africa and Hong Kong*," the researchers found that upon interrogation of the CITES trade database, that almost all the trade in hippo teeth ivory was via Hong Kong. However, the volume of imports declared by Hong Kong was substantially different than the quantity reported by the exporting countries (Uganda and Tanzania), with the source of some 14,000kg of hippo teeth unaccounted for and thereby deemed to stem from illicit activity (Note: 14,000 kg is equivalent to 2,700 hippos, or 2% of the world's hippo population). Presumably, this excess of imports was sourced from illegal hippo hunting.

Figure 10 - Trophy Hunting of hippos continues, despite the species being potentially persecuted by such means to obtain ivory

CITES (Species+) categorises the hippopotamus at Appendix II, with the annual, ongoing trophy hunting quotas (and ivory quotas) as follows:

> 2019 – Ethiopia, 6 trophies (20kg raw ivory, 20kg worked ivory); Tanzania, 10,598kg of teeth as trophies (from 1,200 trophy animals); Mozambique, 53 trophies.

The EU (Council Regulation (EC) No 338/97, EC 20 January 2017) listed this Annex B species for restrictions (similar to Annex A measures), with the intention to address the potential negative impacts of trophy hunting on the species (DEFRA, November 2019, paragraph 27.)

Lewison 2007 evaluated a model population of the species, modelling the relative impacts of the known threats to persistence - habitat loss (from agricultural or larger-scale development) and hunting pressure. While accounting for rainfall variability and demographic stochasticity, the model suggests that combinations of habitat loss and even moderate levels of adult mortality from hunting (1% of adults) can lead to relatively high probabilities of population declines over the next 30–40 years.

Therefore, it is essential that action is taken to prevent the hippopotamus being exploited illicitly for its teeth as a source for ivory from commercial trade and the fake utilisation of supposedly 'non-commercial' trophy hunting of hippopotamus (as evidenced in Zambia in 2018) as a means to obtain teeth/ivory. If action is not taken, then the wild hippopotamus as a species will undoubtedly be pushed to extinction (Quartz Africa 2017).

3.7.3.5 White Rhinoceros (Ceratotherium simum) and Black Rhinoceros (Diceros bicornis)

The IUCN Red List categorises the White rhinoceros as "*Near Threatened,*" with the Black rhinoceros as "*Critically Endangered*" on the IUCN Red List, population increasing.

The Southern white rhinoceros is CITES (Species+) Appendix I listed, apart from the populations of Eswantini (formally Swaziland) and South Africa which are Appendix II listed for the "*exclusive purpose of allowing international trade in live animals to appropriate and acceptable destinations and hunting trophies*."

The EU (Council Regulation (EC) No 338/97, EC 20 January 2017) listed this Annex B species for restrictions (similar to Annex A measures), with the intention to address the potential negative impacts of trophy hunting on the species (DEFRA, November 2019, paragraph 27.)

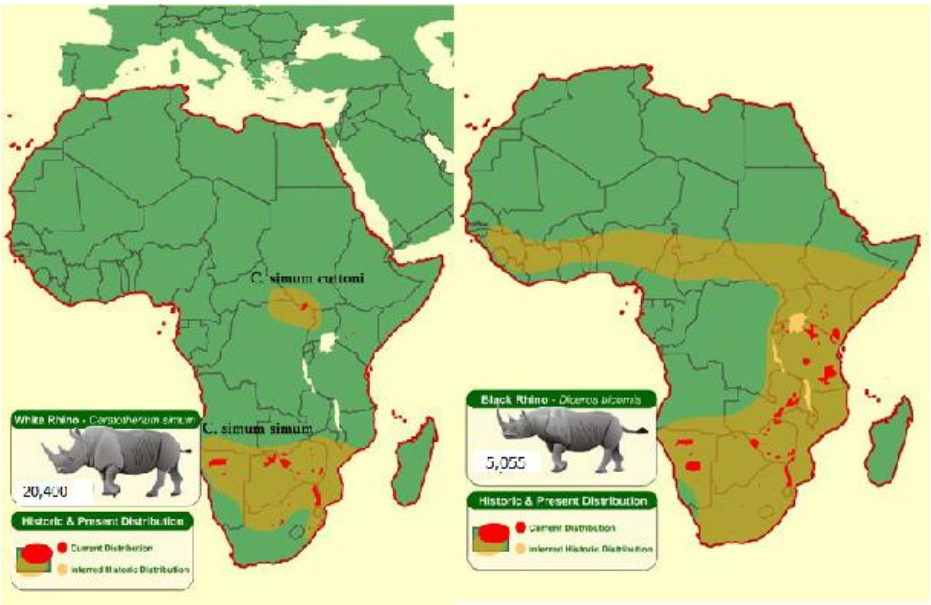

Figure 11 - White and Black rhino populations (IUCN 2012)

There are about 20,000 White rhinoceros, the vast majority (93%) in South Africa, with an additional 6,000+ held privately in captivity, with rhino-breeders speculating upon the reinstatement of international trade (banned by CITES since 1977) in rhinoceros' horn. There

are no CITES suspensions for hunting quotas for White rhinoceros - the hunting quota set in South Africa and other range states is opaque.

The Black rhinoceros is also (Species+) CITES Appendix I listed, but with a trophy hunting quota of 5 set for Namibia. South Africa moved from 5 black rhinos a year to "*harvest*" up to 0.5% of SA's black rhino population (CoP18) – or around nine black rhino per year at today's species' population level. There are perhaps 5,000 Black rhinoceros in total left in the wild.

The wild African rhino (White and Black rhinoceros) species suffered near collapse in population at the approach of the 1900s – due to over-hunting and poaching, with as few at 50 wild White rhino at the turn of the century (Taylor et al. 2017):

> "*South African populations of black and white rhinos (subspecies C. s. simum), both of which had been nearly extinct in the year 1900 due to uncontrolled hunting….*"

Project 'Operation Rhino' was launched in the 1960s, aimed at increasing rhino populations by moving some of the last remaining rhinos to game reserves across South Africa and the African continent.

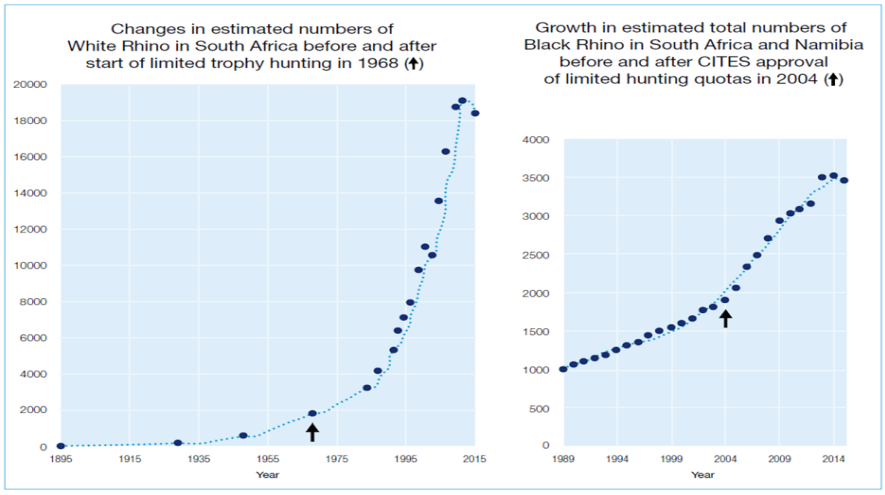

Figure 12 - The Recovery of African White and Black Rhinos – Roe, D.; Cremona, P., 2016 – "*Informing decisions on trophy hunting: A Briefing Paper for European Union Decision-makers regarding potential plans for restriction of imports of hunting trophies*," IUCN

A rhino trophy hunting ban was initiated at the same time as Operation Rhino's launch. As the rhino populations started to recover in the reserves, more land was needed. Private game

farms were incentivized to take surplus rhinos, but in return the ban on trophy hunting of white rhino was lifted with 'controlled' hunting re-introduced in the 1970s. This encouraged the private game farmers to breed rhino stock.

Prior to 2007, rhino poaching figures in South Africa were in single figures, or zero. But in 2009 there was a notable 'upswing' in the level of poaching observed in South Africa which rose to a peak in 2014 at 1,215 rhino, but with a slight decline to 1,175 rhino recorded as poached in 2015 (TRAFFIC 2016) – totalling 5,309 rhino lost to poaching between 1980 and 2015.

This 2009 'upswing' in rhinoceros poaching in South Africa could be attributed to an exponential rise in demand for rhino horn in a newly wealthy Asian middle class and the misguided 'belief' perpetuated around 2005/06 in Vietnam (Guardian 2011) that rhino horn could be a "*cure for cancer*." Regardless of the origin, or reason, the 'upswing' has been sharp and sustained.

It has been suggested that this 'upswing' coincided with a 2009 South African moratorium on 'legal' trade in rhino horn being initiated because of "*pseudo hunting*" to obtain rhino horn:

> "*Some hunters have been abusing permits to shoot rhinos and export illegally obtained rhino horns – probably poached and directly linked to organised crime – as "hunting trophies"*" – "*South Africa freezes rhino horn trade*" - TRAFFIC 2008

Therefore, excessive rhino trophy hunting helped cause the initial low in rhino populations and trophy hunting led to a moratorium on the domestic rhino horn trade because of "*pseudo hunting*" abuses – using trophy hunting to obtain rhino horn (also reference paragraph 1.1.1). However, the pro-trophy industry often cites the recovery of rhino as their success story, but fail to mention that hunting played a significant part in the initial demise of rhino and trophy hunting has since been abused to obtain rhino horn.

Therefore, it's questionable if the trophy hunting of wild, or captive rhino actually serves an altruistic conservation purpose (how does anyone know the motives for the desire to obtain a rhino hunting trophy – is it just to obtain rhino horn as a tradeable commodity?).

It is estimated that the captive rhinoceros' population within South Africa totals more than 6,000 animals:

> "*….some 6,000 rhinos live on privately owned farms (Knight 2016, DEA 2014). Many of them are regularly dehorned in anticipation of trade and dependent on supplementary food (Warren 2015)*" - "*Pointless - A quantitative assessment of supply and demand in*

rhino horn and a case against trade," NABU International Foundation for Nature, paper authored by Barbara Mass.

These captive rhino live a synthetic existence and are also subject to trophy hunting attrition, plus the pro-trade campaign to re-establish an a international rhino horn trade (IWB 2019c), banned by CITES since 1977. Illicit activity to profit from rhino horn abounds (Ginkel 2016), but 'legal' trade is not a guaranteed solution (IWB 2019c).

Therefore, it is essential that action is taken to prevent the rhinoceros being exploited by pseudo (trophy) hunting to illicitly obtain rhino horn, as any legitimising of demand potentially stimulates poaching to meet demand.

3.7.3.6 Polar bear (Ursus maritimus)

The polar bear is listed as "*Vulnerable*" (IUCN Red List) with its species population trend "*unknown*" and CITES (Species+) Appendix II listed with no CITES suspension on hunting quotas.

The DEFRA guidance (November 2019, paragraph 27.) stated that the EU listed this Annex B species for restrictions (similar to Annex A measures), with the intention to address the potential negative impacts of trophy hunting on the species. However, this is not apparent within Council Regulation (EC) No 338/97, EC 20 January 2017. But, at recently as September 2018, the EU's Scientific Review Group (SRG) re-expressed a "*Negative opinion for import of specimens*" from the Kane Basin subpopulation for *Ursus maritimus* from Canada.

Figure 13 - Polar bear trophy hunt

Inuit tribes (Nunavut indigenous communities) in Canada 'sell on' their historic rights to co-manage Polar bear numbers (IUCN 2016, Case Study 10):

> "*600-700 Polar bears every year..... However, half of the bears that are killed are not actually shot by an Inuit hunter or used by Inuit people. In fact, a full half of the bears*

> *that are killed are either shot directly by non-Inuit hunters or the "products" i.e. bear parts are sold to non-Inuit people. A Polar bear hunting trip may cost between $40,000 and $75,000 dollars" – Captain Paul Watson, Sea Shepherd.*
>
> *Roughly half of the fees [and all of the Polar bear meat apparently] taken enter the northern Inuit communities, the remainder goes to the 'Outfitters' with approximately 400 - 500 polar bears harvested annually in Nunavut during 2000 - 2012 -* IUCN 2016

So, let's say for 500 Polar bears per annum at $45,000 per hunt, this equates to approximately:

- Outfitters income per annum - $11m USD
- Northern Inuit communities' income per annum - $11m USD

There is clearly 'big money' to be made by the Outfitters, plus the Inuit are also able to offset generally low-income levels and high levels of unemployment within Inuit communities, by allowing paying hunters to 'take pleasure' in paying to kill Polar bears on the Inuit's behalf. Where is the ethics and proud dignity being displayed by the Inuit, when they are turning Polar bears into a commodity whose life can be sold to the highest bidder?

The proven science for setting Polar bear hunting quotas is apparently based on annual updates "*through a co-management system that integrates the best available scientific and traditional ecological knowledge.*" Is there a clear, independently established scientific divide being made between Inuit Polar bear management and inevitable human greed creeping in to maximise commercial income from the potential over-harvesting of Polar bears?

The IUCN 2016 Briefing Paper, Annex Case Study 10, supports the above Inuit income seeking enterprise as good. How? Because it provides humans with income? But what about the conservation of the Polar bears and the threats faced? If the Polar bear harvesting advocated is so low impact, then why did the United States list the Polar bear as 'Endangered' and ban imports of Polar bear trophies into the United States from 2008 and since pushed for the 'uplisting' of Polar Bears from CITES Appendix II to Appendix I protection?

The IUCN lists the Polar bear (*Ursus maritimus*) as "*Vulnerable*" but also suggests that Polar bear population data in Canada is not as comprehensive as one might hope, which begs the question just how accurate is the 'science' being used to say the Polar bear "*harvesting*" is sustainable? The biggest threat faced by Polar bears is climate change and shrinking habitat; how has that been modelled into "*harvesting*" sustainability supported by the IUCN?:

> "*In some jurisdictions in Canada, the governance system includes aboriginal co-management boards and aboriginal hunting organizations. In some of these co-management systems, both local knowledge and science are to be considered equally in both management and research decisions. Although scientific studies have concluded that the long-term effects of capturing and collaring polar bears are minimal (Ramsay and Stirling 1986, Messier 2000, Thiemann et al. 2013, Rode et al. 2014a), some local groups nevertheless consider these techniques disrespectful or harmful to the animals. As a result, population inventory and ecological studies have been delayed or not permitted. On the other hand, alternative research techniques such as aerial surveys and genetic biopsy capture-recapture methods were designed and implemented. Reduced monitoring will constrain governments' ability to assess sustainability of harvest especially if abundance is estimated from aerial surveys which cannot provide data on vital rates (Aars et al. 2009, Stapleton et al. 2014)*" - IUCN

The question is can the 'Endangered' Polar bears only still deserve recognition by the Inuit because the Polar bear is now a 'valued $ commodity' in their eyes to derive income from?

Is this a new definition of 'conservation' we should all 'accept' that despite a historical subsistence killing for food only policy, the Inuit now see the 'Endangered' Polar bear as a critical income stream to offset low wages and unemployment and call it 'conservation?' Conservation of what, the Inuit?

3.8 Question 11: "*Please provide evidence of the impacts of restrictions on trade, import or export of hunting trophies, or impacts of domestic restrictions on the practice of trophy hunting on: b) livelihoods and the well-being of rural communities living with wildlife*"

3.8.1 Canned/Captive Industry Employment and Livelihoods

In the 2018 working paper ("*The Economics of Captive Predator Breeding in South Africa*" (Harvey 2018)) it was found that:

> "*……from 47 facilities that generate cashflow from exploiting predators in one form or another (excluding hunting and bone-processing facilities) - the figure is $28.5 million in annual gross revenue, which equates to about R380.9 million a year. The average revenue per facility is calculated at $606,459. The range is incredibly wide, however, with a minimum gross revenue figure of $88,560 a year and a maximum of $5.1m a year*" but "*If the industry only employs 613 people directly and supports an additional 700……..the results suggest that there is an enormous amount of money accruing to facility owners…*"

Therefore, based upon this evidence, the canned/captive breeding industry is not of significant, direct financial support to local livelihoods and the well-being of any rural communities in the vicinity. Therefore, restrictions on trade, import or export of canned/captive hunting trophies is not going to impact local livelihoods, just the income stream of facility owners.

Harvey (2018) also concluded that "*Even if the land [occupied by captive predator breeders] did revert to agriculture [joining up tracts of ex-predator breeding lands], the resultant local employment benefit may well exceed the current employment benefits of the predator breeding industry*" – which, suggest local livelihoods might be boosted in the absence of intensive predator breeding facilities occupying tracts of what could be 'agricultural' land.

3.8.2 Rural Communities Living with Wildlife

According to Adam M Roberts (Born Free Foundation 2015) - CEO of Born Free Foundation and Born Free USA:

> "*There is very little evidence that the proceeds of trophy hunting benefits conservation or local communities in the hunting areas, with as little as 3% or less of the revenue generated trickling down. Lions and other charismatic wildlife are worth far more alive than dead to Zimbabwe's tourism industry. In Zimbabwe it is estimated that trophy hunting generates only 3.2% of total tourism revenue.*"

The above figures appear to be extracted from the Economists at Large report (Economists at Large 2013) which concluded:

> *"Research published by the pro-hunting International Council for Game and Wildlife Conservation and the UN Food and Agriculture Organisation, supported by other authors, finds that hunting companies contribute only 3% of their revenue to communities living in hunting areas. The vast majority of their expenditure does not accrue to local people and businesses, but to firms, government agencies and individuals located internationally or in national capitals. As the quote above demonstrates, expenditure accruing to government agencies rarely reaches local communities due to corruption and other spending requirements".*

Based on an estimated £151m ($235m USD) (Economists at Large 2013) industry turnover, at 3% trickle down this equates to £4.53m ($7.07m USD) getting down to the grass roots level of conservation and local communities across 9 countries. Based on US Census numbers (2009) these same 9 countries have a combined population of some 243m. So, the Trophy Hunting income trickle down of 3%, £4.53m ($7.07m USD) divided by 243m people, equates to just £0.02 ($0.03 USD) per capita. Even if one was to hypothesise that only 5% of the population (12.15m) 'benefit,' that still only equates to £0.4 ($0.62 USD) per person.

In the area surrounding Hwange National Park, Zimbabwe, Loveridge (2018, page 242) states:

> "*I've seen almost no benefit to villages around Hwange National Park – from hunting or, indeed, from any kind of conservation revenue…….The promise of improved livelihoods through revenues derived from trophy hunting does not appear to be fulfilled, nor is hunting incentivizing people to tolerate wild animals*."

A ban on trophy hunting in Northern Botswana revealed negative consequences on the communal economy in areas that were previously hunting grounds. According to one study, the revenue generated by hunting expeditions represented around two-thirds of total tourism income (Mbaiwa 2015). According to Mbaiwa 2015, the ban on trophy hunting also led to halting certain community-based natural resource management (CBNRM) programs due to loss of funding for these opportunities.

Therefore, careful consideration must be given to any transition away from dependence upon trophy hunting income trickle-down to local communities and/or community programs.

Even at a mere 3% trickle down of hunting income, to some communities that is important welfare/subsistence (which is not the same as species conservation per se). It should be borne in mind, that such human dependence on trophy hunting income does not necessarily correlate with species conservation – just because local communities enjoy some trophy hunting income does not necessarily mean that wildlife in the locality is free from human-wildlife conflict and attrition for evermore – the risk of human wildlife conflict can be increased by the presence of trophy hunting:

> Brent Stapelkamp (Ref. Appendix 1) worked within WildCRU for 10 years on the 'Hwange project' in Zimbabwe. Staplekamp (2016) has provided a welcomed, fundamental insight and perspective on that work, identifying patterns in the data that point to lion trophy hunting having a much wider negative impact; where trophy hunting of key pride members acts as a catalyst driving surviving pride members into human/wildlife conflict.

3.8.3 Trophy Hunting's Employment and Livelihoods

In terms of employment (local communities or otherwise), then trophy hunting's claims have been overstated:

> "*….trophy hunting activities do not generate 53,000 jobs as claimed but rather between 7,500 and 15,500 jobs…..Trophy hunting tourism employment is only 0.76% or less of average direct tourism employment in study countries*" - *Economists at Large 2017*

3.9 Question 11: "*Please provide evidence of the impacts of restrictions on trade, import or export of hunting trophies, or impacts of domestic restrictions on the practice of trophy hunting on: c) economic development*"

Perhaps there is an over reliance on trophy hunting as means of providing subsistence support to low-wage communities?

Perhaps this reliance is stifling innovation and economic development (reference paragraph 3.11)?

3.10 Question 12: "*Please provide any evidence of the impact that import and export of hunting trophies to and from the UK has on supporting local livelihoods [in the UK]*"

It would be hypocritical to only consider the importation of hunting trophies into the UK in any all-encompassing (Option three) ban/restrictions on such activity.

The UK has its own trophy hunting industry, with potential subsequent exports of hunting trophies from deer/roebuck/sika, fallow, Red stag (plus the hunting of grouse, pigeon, goats, sheep on the Isle of Islay, the latter causing public outrage in 2018).

UK hunting tours are being advertised overseas, such as Danish company Limpopo and Diana Hunting, which includes hunting tours in Scotland in its offerings.

The income from Scottish deer management is estimated (2016) at approximately £12.5m, with £6.843m derived from "*income received from sporting clients*" [trophy hunting], but expenditure on deer management was far greater at £43.1m (2016):

> *"The total direct expenditure on deer management in Scotland in 2013/14, according to the survey respondents, was £43.1m: £7.7m capital expenditure, £15.2m on staff, and £20.2m other operational expenditure (rounded to nearest £100k). This was partially offset by £12.5m in income from deer management…with the full-time equivalent [FTE] of this employment is 845 FTEs (722 paid, 124 unpaid)…..other research on shooting sports and Scottish country sports tourism suggests that the total impact of deer management on the Scottish economy, including stalking and associated hospitality, and the supply chain within Scotland, is £140.8m of total*

expenditure, supporting around 2,500 FTE paid jobs in Scotland" - "*The Contribution of Deer Management to the Scottish Economy*," PACEC, 2016

There is also deer trophy hunting in other areas (such as Woburn Abbey) of the UK, with a £6,965 (2018) to kill a "*grade A*" Père David deer (*Elaphurus davidianus)* - a very rare breed "*Extinct in the wild*."

Are such business practices (to manage deer) justified? Most deer hunting is justified by its proponents as necessary culling to manage deer populations, which after the eradication of any natural predators, then human management (culling) becomes a necessity - wolves, natural deer predators were driven to extinction in Scotland/England by hunting and persecution in the 1700s. Such human persecution still persists today for predator species across the globe, such as the puma.

Therefore, any Option 3 ("*A ban on all hunting trophies entering or leaving the UK*") has profound implications for the hunting sector in the UK, but alternatives do exist and have been proposed in the UK, particularly for deer management in Scotland (reference Paragraph 3.11.2.).

3.11 Question 13: "*Please provide any evidence of alternative practices that could deliver similar ecological, social and economic benefits in the UK and abroad to those that trophy hunting is purported to provide*"

3.11.1 African Trophy Hunting - Alternatives

Trophy hunting arguments are often based upon the money generated (and the assumption of trickle-down economics to local communities guaranteeing a reduction in human wildlife conflict).

However, by that rationale, the animal deaths inflicted by trophy hunters is an unnecessary by-product - only the funding generated is key to conservation by trickle-down economics to sustain "*livelihoods*" and give wildlife "*value*:"

> "*Trophy hunting: Bans create opening for change"* (Novak et al. 2019) review of the common arguments made in favour of trophy hunting "*actually describe is how loss of funding may impart these effects [could threaten African biodiversity and livelihoods], without specifying any unique benefits of trophy hunting*."

So, if the necessary funding can be secured by other means to support "*livelihoods*" and ensure human wildlife conflict mitigation (ie. wildlife "*value*"), then the animal killing by trophy hunters is a repugnant irrelevance, perpetuated to satisfy the trophy hunting lobbies' need to kill animals in the name of so-called "*sport.*"

Novak et al. 2019 contend that "*trophy import bans present an opportunity to rethink how we can conserve wildlife in non-extractive ways that are consistent with shifting public opinion."*

The examples Novak et al. offer for alternatives include:

> "*..land use reforms, co-management, and greater participatory stewardship can provide a more sustainable, resilient, and equitable system. Locally adjusted and bottom-up management practices, granting communities land titles, conservation-compatible agriculture, and coexistence approaches can also benefit communities and conservation more than trophy hunting. In addition, tourism reforms could invigorate domestic tourism, minimize leakage of tourism income to foreign investors, and reduce the footprint of wildlife-viewing tourism through green development investment. Diversified nature-based tourism beyond photographing and viewing wildlife could*

> *incorporate survival skills/bushcraft training and agritourism, emphasizing local knowledge, cultural exchange, and inclusion of women. Finally, environmental investments could connect would-be micro-investors more directly to wildlife-wealthy communities. Financial strategies such as decentralized markets made possible by blockchain technology could use carbon [carbon offsetting] and biodiversity credits for conserving habitats. Sustainable enterprise development could generate direct financial benefits to local communities*."

An example of a habitat and nature conservation initiative in Scotland (Highland Titles) offers the public the opportunity to purchase modest plots (in return for a token title, of "*Laird, Lord or Lady*"), thereby funding the nature reserves under its management. Such models/initiatives could work to protect other habitat in Africa for example, by "*granting communities land titles"* which can then be re-sold (with limited rights/leasehold) to private individuals across the globe to protect and support the local community, habitat and the incumbent wildlife (under certain, prerequisite conservation criteria).

There is no doubt that hunting occupies large tracts of land/habitat. In sub-Sahara Africa, very large areas are used for big game hunting (approximately 1.4 million square kilometres). This big game hunting area is 22% larger than all the areas designated to National Parks in the same region (IUCN/PACO 2009).

So, there is no denying, when it comes to habitat the hunting industry has control over these vast hunting areas and therefore, significant influence. The hunting industry claims that its hunting areas protects habitat, generates revenue for local communities, and provides funds for anti-poaching units (Deere et al. 2011; Lindsey et al. 2012).

Harvey (2019) argues that "*Paying community members directly through a carbon credit system, for instance, is far more likely to yield ecological and economic sustainability than trophy hunting. If community members are being paid to keep migratory corridors open and farm in conservation-compatible ways, for instance, threats to wildlife will be significantly reduced……Moreover, these alternatives avoid the governance problems associated with community trusts that are typically riddled with power politics, gatekeeping and in-fighting over how revenues are to be allocated*."

The IUCN/PACO (2009) reported that actual economic benefits to local communities of hunting areas are minimal, employment opportunities are poor and the wildlife contained within hunting areas are far less well protected than wildlife contained within protected, non-hunting areas:

> "*Certain conservation strategies have been based on a theory developed around thirty years ago, according to which wildlife had an economic value which would convince local communities to preserve it. All the figures, maps and data consulted show that this theory is in fact untenable and that the economic value is not sufficient to generate the expected behaviour change*" - IUCN/PACO (2009), "*Conclusions*," page 106

So, apart from saving the habitat, it's questionable what other benefits the majority of hunting areas actually deliver for conservation, particularly when quotas for trophy hunting "*off-take*" has also been shown to be excessive (Packer et al. 2009) in many cases, actually perpetuating the species' decline?

In the 2016 report for the United States House Committee on Natural Resources, the conclusion with regard to trophy hunting financing conservation efforts was clear:

> "*In assessing the flow of trophy hunting revenue to conservation efforts, we found many troubling examples of funds either being diverted from their purpose or not being dedicated to conservation in the first place……On the whole, though, the evidence shows that trophy hunting is having negative impacts across sub-Saharan Africa. According to scientists, unsustainably high rates of trophy hunting have caused population declines in African lions and possibly African leopards. Many hunting areas are also fenced, which fragments the habitat into small blocks and alters species migrations*" - House Committee on Natural Resources, 2016 – "*Missing the Mark – African trophy hunting fails to show consistent conservation benefits*"

It can also be argued that "*Trophy hunting does not provide agency or self-determination. If anything, it deepens dependency on wealthy 'donors' (hunters) and crowds out the importance of thinking deeply about more appropriate home-grown alternatives [for real conservation]*" - Harvey (2019)

But, playing devil's advocate, there is clearly a need to have contingency plans in place to replace trophy hunting income where is does exist in otherwise remote, non-tourism habitat – but where the trophy hunter is happy to go and pay to get their thrills and kills ("*Opinion - trophy hunting is not all black and white, says conservation biologist*"). In these areas, where trophy hunting is perhaps acting as a buffer to human wildlife conflict, then the imperative is to find alternative schemes to 'value' wildlife (in the minds of the local community) in non-consumptive ways.

However, it should always be borne in mind, that the trophy hunter's attrition in such areas can always lead to species decline due to poor regulation of the trophies taken (ie. too many

male lions) – even in remote habitat, trophy hunting does not necessarily equate to conservation. Trophy hunting income's purported benefits is only theoretically offset as the '*best bad option*' if one truly believes that in the absence of trophy hunting, then the local community would poison and spear all such wildlife out of existence and/or, such remote hunting concessions would be rapidly turned into agricultural (ie. livestock grazing) lands and hence increase the likelihood of human wildlife conflict escalating.

But the financial pressure to convert even remote hunting concessions into agricultural use (assuming it is a feasible option for the hunting concession land in question) is likely to happen at some point anyway, due to human population growth and increasing demand for land for food:

> The hunting industry across sub-Sahara Africa generates an income of approximately $230m USD per annum (Economists at Large 2013). So, that equates to approximately $230m USD/1.4 million km^2, or approximately $164.3/$km^2$ ($1.64/hectare). In contrast, it is suggested (IUCN/PACO (2009)) agriculture generates 300, to 600 times more per land unit area, so there is undeniable pressure on habitat/land returns as human population growth will increasingly demand (and will look increasingly economically viable) more land use for livestock and agriculture.
>
> To put that increasing human demand into perspective, between 2015 and 2050, half of the world's population growth is expected to occur in 9 countries, 6 of which are within the lion's range (India, Nigeria, Democratic Republic of the Congo (DRC), Ethiopia, Tanzania, and Uganda (UN 2015, p. 4). Africa has the fastest population growth rate in the world (UN 2015, pp. 3, 9; UNEP 2012a, p. 2), and future population growth in sub-Saharan Africa is projected to be large and rapid (UN 2013, p. 9). By 2100, Angola, Burundi, DRC, Malawi, Mali, Niger, Somalia, Uganda, Tanzania and Zambia are projected to increase by at least five-fold (UN 2015, p. 9).

So, unless provisions are made now to conserve wildlife even in remote, present day hunting concessions, the wildlife inhabitants are not safe from over-hunting, or a secure future where such habitat becomes increasingly viable for agricultural use – unless alternative schemes are devised and implemented as a matter of urgency to secure and protect such habitat.

3.11.1.1 Wildlife Points/Biodiversity Credits

A scheme, whereby general public purchases could be rewarded by the retailer, off-setting carbon content of any given purchase via a 'wildlife points' system – similar to any loyalty reward points-based programme, but with points specifically directed at wildlife protection, be that funding habitat (ie. purchasing former hunting concessions for use as eco-friendly areas), to buying human wildlife conflict mitigation measures etc.:

> Such measures include fencing (bomas) livestock in affected communities*, "to radio collaring of lions so that communities can be alerted to the proximity of lions; the use of donkeys and dogs to alert people; better stock management techniques; and compensation for the loss of stock to lions" - UK Parliamentary Debate, African Lion Numbers - Hansard, 24 Nov 2015 : Column 352WH*

International Wildlife Bond has outlined such an approach on its website – Reference "*How does the bond purchase work?*" – but such a platform needs funding, development and collaboration across similarly minded NGOs to make it a reality.

3.11.1.2 Certification of Trophy Hunting

Lindsey et al. 2007 propose that the lack of 'well-regulated' trophy hunting can be solved by 'Certification' whereby some independent (it's assumed) regulatory body could provide guidance as to appropriate and inappropriate trophy hunting operators etc.:

> "*Certification would enable clients to select operators on the basis of their commitment to conservation and community development and could create economic incentives for hunting operators to conduct their activities more in line with conservation objectives. Incentive-based compliance is likely to be more effective than trying to regulate operators in vast, remote hunting concessions in nations struggling with corruption and poor governance……certification system has been suggested in the past, but has not yet been accepted by the hunting industry (Lewis & Jackson 2005). Cooperation with the development of such a system would be a major step toward convincing conservationists, African governments, and a skeptical public of the legitimacy of trophy hunting as a conservation tool*.

However, it is not made clear by Lindsey et al. 2007 how such a Certification body would be established (who could be trusted?) and funded (who will pay?) and crucially, how such a certification body could be impartial and independent and not fall foul to corrupting influences – ie. hunting operators buying favourable certification credentials.

It should be borne in mind that the trophy hunting industry has had decades to reach the promised nirvana of universal "*well-regulated*" trophy hunting, but has failed through greed, corruption and a masquerade of 'conservation' imperatives – which have failed to materialise. The proposed Certification process is long overdue, but is hardly likely to become established anytime soon and even if it does, is unlikely not to become corrupted by the pro-hunting lobby.

WildCRU's 2016 report (Paragraphs 3.1 and 3.2) reiterates hunting industry reforms that have been 'recommended' for the past decade (or longer) – such as "*Lease length, allocation and fixed quotas,*" "*Restrictions on lions able to be hunted*" etc., all of which do not guarantee any increase in conservation return if not adequately regulated and enforced in the field.

The conclusion from such repeated calls over the past decades for the hunting industry to adopt these same reforms advocated in the WildCRU report, must be that the hunting industry remains wedded to short term profiteering in its business model, stifling any 'conservation' based reforms that might negatively impinge on that model's income stream. The ultimate implication being, conservation is low on the list of the hunting industry's priorities (despite self-proclamations to the contrary). Any expectation or 'faith' that the hunting industry will suddenly reform is not widely held.

3.11.1.3 Conflict Mitigation

Minimising livestock incursion into wildlife habitat, fenced (bomas) protection for livestock at night, and 'lions lights' that deter lions from approaching bomas. However, on the scale required, this level of 'basic' protection is not cheap – it is estimated (Abell et al. 2013) that to build a bomas (at £1,200 ($1,940 USD) per household) to protect the livestock held by the population of Zambia (approximately 236,097 households exist in Zambia's lion ranges, 68% of these households keep livestock), the cost to fence/bomas every household's livestock would be in the region of £192m ($311m USD). Then roll this out across the entire range of the lion across Africa……without considering on-going population expansion, compensation schemes and management costs etc. The financial resources and will just do not exist to make

such Conflict Mitigation programmes universally available, unless a new alternative approach is adopted - such as "*green development investment……carbon and biodiversity credits for conserving habitats"* (Novak et al. 2019), or international development funding from nations, such as the UK.

Private initiatives already exist seeking funding (independent of trophy hunting income) to provide bomas - reference the Soft Foot Alliance's inspiring "*Mobile Bomas*" project. Such projects just need adequate investment and scaling to make a guaranteed difference to human-wildlife conflict mitigation.

3.11.2 UK Trophy Hunting - Alternatives

There have been suggestions that rewilding, including predator species, such as lynx and wolves could help manage deer populations (as an alternative/ supplement to human culling deer) - wolves, natural deer predators were driven to extinction in Scotland/England by hunting and persecution in the 1700s.

Reintroductions of lynx into other European countries have been remarkably successful (Lynx Trust UK), but with the EU recently announcing farmer compensation schemes to try to ensure farmers remain on-side with such rewilding. In Romania, there is increased reporting of Brown bear attacks, perhaps due to bear population expansion since a 2016 trophy hunting ban to encourage the native wild bears with a chance to recover (which would seem to have been successful). There has to be a balance struck to maintain public support for such re-wilding programmes.

The lynx hunts deer and smaller prey such as rabbits and hare, and is not regarded as a danger to humans. Wolves are also proposed for rewilding in England and Scotland:

> "*While wolves and sheep may not be the perfect social mix, introducing wolves to Scotland's deer population could, one study suggest, benefit even the big estate owners (The Royal Society 2007). The overpopulation of deer, while it is pleasing to stalkers, presents them with a major management problem*" (Monbiot 2013)

> "*In this paper, we have suggested one advantage of the reintroduction of wolves—solving some of the difficult issues surrounding deer management in Scotland. We*

> *have also shown that the public is quite positive towards wolf reintroduction, which is a prerequisite for a successful reintroduction programme*" - (The Royal Society 2007)

However, such rewilding remains a controversial issue, because of feared predation of livestock, such as lambs/sheep. However, The Royal Society 2007 found that livestock farmers in Scotland were not as resistant to such rewilding as expected:

> "*It is instructive to note, however, that farmer attitudes are less negative than might have been expected, and substantially less negative than the attitudes expressed by their representative organization… So, why are sheep farmers not more strongly opposed to wolf reintroduction? Part of the reason may be that, on average, little or no profit is made directly from sheep by Highland farmers—profits accrue through subsidies. For example, the average profit per sheep farm in the Highlands in 1999–2000 was £24,300, of which £24, 500 was through subsidies…..If farmers are given economic compensation for wolf-killed sheep, the conflict potential need not be too high"*

The same logic applies to rewilding lynx and potential livestock predation (though lynx are elusive and with a sufficient natural prey base, are unlikely to trouble sheep herds ("*The lynx effect: are sheep farmers right to fear for their flocks?*" The Guardian, 23 July 2017)).

It is assumed that the UK's main trophy hunting revenue is derived from stalking in Scotland, but as stated above (paragraph 3.9) the £12.5m (£6.843m derived from "*income received from sporting clients*" [trophy hunting]) does not cover the expenditure on deer management (£43.1m) in Scotland. Alternatives to help manage deer populations do exist, such a rewilding. So amateur "*sporting clients*" indulging their passions for killing deer is not a necessity if rewilding can be successfully introduced.

3.12 Question 14: "*Please provide any evidence on the scale of revenues from trophy hunting, particularly in relation to other sectors in the economy*"

If money is the key to species conservation, then general tourism has far greater financial potential - to support habitat protection in the vast majority of past hunting concession areas and thus support conservation without the excuse of the '*sacrifice of one, saves the many*.' Table 1 below shows that tourism income far outweighs hunting income across Africa.

Table 1 – Trophy Hunting, Tourism Income and Population (IWB 2015a, Economists at Large 2013)

	Population[(a)] (million)	Trophy Hunting Revenue[(2) (b)] ($m USD)	Tourism Revenue[(2)(b)(c)] ($m USD)	Trophy Hunting Revenue as % of Tourism Revenue
South Africa	51.4	112	9,547	1.2%
Ethiopia	84.3	1.45	522	0.3%
Cameroon	18.9	2.4	159	1.5%
Tanzania	44.9	32.9	1,457	2.3%
Zambia	11.8	7	125	5.6%
Botswana	2.0	25.4	218	11.7%
Namibia	2.1	32.8	517	6.3%
Burkina Faso	15.7	0.8	72	1.1%
Zimbabwe	11.8	20	634	3.2%
	242.9	**234.75**	**13,251**	**1.77%**

(a) Based on US Census numbers (2009)
(b) All figures converted to 2011 $ USD
(c) UNWETO (2012)

Note 1 - It is not clear in the context used if 'Trophy Hunting' includes, or excludes 'Canned Hunting.'

Note 2 – It is not clear how Governments set their permitted hunt quotas – It is not often scientific and is suspected to be corruption (reference (1), para4.2, iii) many cases, Government revenue appears the main driver.

In a 2008 report (Lindsey 2008) it was estimated that income from Trophy Hunting[(Note 1)] generates at least $201m per year across 23 sub-Saharan African countries. These figures appear to be direct income from trophy hunters to hunting tour operators, so excludes permits bought at auction, travel, hotels and other income generated in country. We can safely assume that with an adjustment for inflation alone, the income today can be projected to around $300m USD.

Just to put that income into perspective, the 2008 figures (Lindsey 2008) are based on 18,500 international Trophy Hunter clients, so an average of around $11,000 USD per trophy hunter. The hunting taking place over some 1.4m km^2 of land area, which is an area 22% larger than the area designated as safe, protected havens for wildlife where hunting is not permitted.

However, those 2008 figures are perhaps an underestimate. The Trophy Hunting industry income for South Africa alone was estimated in 2013 at $112m USD (Economists at Large 2013) (Note 1), with the whole industry across 9 Trophy Hunting countries of Africa estimated at $235m USD.

Southwick Associates (2015) produced a report on behalf of Safari Club International Foundation, which claimed that trophy hunting contributes $426 million across Botswana, Ethiopia, Mozambique, Namibia, South Africa, Tanzania, Zambia and Zimbabwe. But, a more realistic estimate is less than $132 million per year, amounting "*to only 0.78% or less of the $17 billion in overall tourism spending in the studied countries*" – Economist at Large 2017

As a further example, the World Travel and Tourism Council estimated 2012 tourism income for South Africa at ZAR102bn ($8.58bn USD), employing 10.3% of the population and making up 2.3% of South Africa's GDP. In can be seen that in South Africa, trophy hunting is only a fraction of general tourism revenues, with trophy hunting revenue making up less than 0.02% of South Africa's GDP (or trophy hunting is only around 1.2% of tourism revenue).

In a July 2019, The Financial times ("*Trophy assets: lion prices, dead or alive*") estimated that "*any lion would have a net present value [npv] of $179,000*" [LionAid estimated for this FT article that a Serengeti lion's tourism value to Tanzania as $890,000]. The FT article goes on to say, *"that [$179,000 npv] is still more than four times higher than the price [a trophy hunter pays] for shooting a pride master"* – (with a mature male trophy hunting value given as between "*$40,000 - $59,000*" – The Financial Time, 2019). This example shows that the non-consumptive tourism value of charismatic wildlife if far higher than the trophy hunter is asked to pay to kill the same tourist attraction – from a purely asset value perspective, trophy hunting does not make sense in habitat where wildlife tourism is the main economic driver.

3.13 Question 15: "*How much money goes back to communities from trophy hunting compared to other activities such as wildlife tourism?*"

Trophy hunters, hunting supporters and advocates always refer back to the perceived virtue of the economic benefits their 'dedication' to killing animals for trophies contributes. The claim is that local communities in hunting areas financially benefit, plus the subsequent "*conservation*" of wildlife due to the funds raised etc. These 'claims' are based on financial, empirical evidence, but the 'virtues' are nowhere near as widespread as claimed, with as little as 3% of hunting income reaching down to local communities.

For example, Zimbabwe's CAMPFIRE programme (established 1981) was introduced to distribute dividends derived from Trophy Hunting to local communities. In a 2007 study (Kamhorst et al. 2007) communities that should have benefited from the CAMPFIRE programme reported that dividend had not been received since 1997, with no discernible additional benefits for employment or improved infrastructure - corruption has eaten away at CAMFIRE's promise/revenue.

The IUCN/PACO (2009) reported that the economic benefits to local communities of hunting areas are minimal, employment opportunities are poor and the wildlife contained within hunting areas are far less well protected than wildlife contained within protected, non-hunting areas.

In September 2019, the Zambia Community Resources Boards (ZCRB) released a press statement expressing their deep concern over the fact that the communities have not been given their share of either concession fees or the hunting revenues. According to Felix Shanungo (ZCRB President), the communities have received no concession fees since 2016 and no hunting revenue since last year.

In comparison, the income to local communities derived from wildlife tourism is perhaps more general. It is estimated that trophy hunting tourism employment is only 0.76% or less of average direct tourism employment in study countries (Economists at Large 2017), so there is greater scope for local communities to benefit from the scale of general tourism employment in comparison with just trophy hunting.

3.14 Question 16: "*Please provide any evidence to support any concerns about sub-standard welfare of animals which are hunted for trophies*"

3.14.1 South African Canned/Captive Breeding

Canned/captive wild animals under the physical control of humans, whether held temporarily or permanently, fall into a grey area when it comes to welfare regulation and oversight.

This was complicated for canned/captive lion breeding when in 2010, the South African legal ruling ("*The Supreme Court of Appeal of South Africa Judgement*," Case No. 72/10, 29 November 2010) declared captive lion breeding as 'farming' and of no conservation value. The conservation driven 24 month rewilding provision (a captive lion has to be 'free' for 24 months before it could be hunted) disputed by the breeding industry was immediately dropped.

This decision , that lion breeding was 'farming, also meant that the Republic of South Africa, Department of Environmental Affairs (DEA) was not deemed to be responsible for animal welfare for such breeding activities under its environmental remit (but the DEA still needed to consider animal welfare in its decisions – as highlighted in August 2019, when the DEA's decisions were declared unlawful on the grounds that the DEA did not take animal welfare into account in the setting of lion bone trade quotas).

In the breeding and keeping of lions for the lion bone trade there is no commercial incentive to keep lions in a healthy condition, when all that is to be used are their skeletons.

The responsibility for lion canned/captive lion breeding falls down somewhere between the DEA (Department for Environment, Forestry and Fishers – DAFF) and the Department for Agriculture, Forestry and Fisheries (DEFF), plus provincial jurisdictions, due to a statutory regime unintended and unsuited for addressing the issue of wild animal welfare:

> "*There are many welfare concerns around the captive breeding and keeping of indigenous and exotic wild animals for commercial exploitation. Relevant activities include carnivore and predator breeding for hunting and the lion bone trade, as well as for stocking wildlife ranches, and animal interaction facilities, such as lion cub and cheetah petting and walking with lions and cheetahs. Welfare concerns include cruelty, unnatural behaviour, unsuitable conditions, disease, lack of medical care, and distress, but also a disregard for the animals' most basic needs such as water and food.*

Inbreeding is also common which creates offspring with compromised health" - "Public Participation Submission of the Coalition to Stop the Captive Breeding and Keeping of Lions and Other Big Cats for Commercial Purposes," June 2019

Figure 14 - 'Canned' lions being underfed in declining facilities – "Photos emerge of malnourished lions on breeding farm," Africa Geographic, 8 July 2016

There have been numerous welfare cases against the canned/captive lion breeding industry:

- In July 2016, the NSPCA (National Council for the Society for the Prevention of Cruelty to Animals (SPCA)) wildlife division was called in to inspect three Limpopo Province properties owned by Walter Slippers ('Ingogo Safaris'). Vets completed checks on all the lions and big cats held captive, with some noted to be in very poor condition. The Limpopo Provincial Government (Limpopo Department of Economic Development, Environment and Tourism (LEDET)), Nature Conservation office issued the required Permit for Walter Slippers' 'facilities.'

- In March 2019, the Department of Environment, Forestry and Fisheries (DEFF) (officially charged with overseeing welfare of captive bred lion facilities) reported

> that nearly 40% of the 227 registered lion breeding facilities inspected in four of the Provinces were non-compliant with regulations and many were operating with expired permits. Yet the vast majority of the latter expired permits were subsequently renewed without further follow-up recommendations, penalty or work to ensure future on-going compliance.

The breeders' association (the South African Predator Association (SAPA) is a 'members only' self-appointed regulator of lion breeders:

> "*The industry body that exists 'to co-ordinate and promote the interests of its members with a view to establishing and maintaining a healthy and profitable predator breeding and hunting industry in congruence with national and international conservation principles and current national and provincial legislation"* - (Harvey 2018)

The SAPA attempts to portray the industry as a professional endeavour concerned with animal welfare, but this is clearly not the case and any notion of self-regulation of the captive breeding industry has clearly failed:

> *Although SAPA claims that no welfare issues exist among their member lion facilities, earlier this year, as an example to the contrary, the owner of a facility in the North West Province (a SAPA member and member of their Council [Jan Steinman]) was charged by the NSPCA with animal cruelty. Inspectors found 27 lions with severe mange, two lion cubs unable to walk due to Meningoencephalitis, obese caracal unable to groom themselves, overcrowded and filthy enclosures, inadequate shelter, lack of water, and parasitic conditions*" - "*Public Participation Submission of the Coalition to Stop the Captive Breeding and Keeping of Lions and Other Big Cats for Commercial Purposes*," June 2019

The National Geographic recently (report published 21 November 2019) investigated Jan Steinman's Pienika Farm and found that for animal welfare advocates, Pienika "*symbolizes everything that's wrong with South Africa's lion farms*." But since the NSPCA's damming assessment in April 2019, Pienika has perhaps improved its standards…but standards from an abhorrent low point – with the recovery of neglected cubs (Karlos and Ivana) 'surrendered' by Pienika now recovering in privately funded sanctuary. But Pienika's past wrong-doing, cruelty and neglect cannot be excused, where such traits are symptomatic of an industry that treats wildlife as mere disposable commodity.

So, when it comes to canned/captive lions (and other species), there is not much confidence that animal welfare is given due concern by either the breeders, or the fragmented authority over-sight (or lack thereof), with buck passing of welfare responsibility between the Republic of South Africa DEA/DEFF, DAFF and the Provinces.

4 Conclusions

Wildlife faces main threats - agricultural expansion, the illegal wildlife trade and the ever-expanding threat of climate change pose far greater risks to wildlife than trophy hunting's attrition perhaps.

All of these issues need to be tackled, but excusing trophy hunting as the 'best bad option' to save habitat (because it brings in some income that might help) is not a sustainable argument regardless:

- The hunting industry across sub-Sahara Africa generates an income of approximately $230m USD per annum (Economists at Large 2013). So, that equates to approximately $230m USD/1.4 million km^2, or approximately $164.3/$km^2$ ($1.64/hectare). In contrast, it is suggested (IUCN/PACO (2009)) agriculture generates 300, to 600 times more per land unit area, so there is undeniable pressure on habitat/land returns as human population growth will increasingly demand (and will look increasingly economically viable) more land use for livestock and agriculture;

- According to the IUCN 2019b (Chardonnet) report, poaching, hunting and the bushmeat trade have resulted in a rapid decline in trophy animals in Africa. This, amid growing public criticism of hunting, has led to a sharp drop in the number of hunters worldwide. Chardonnet (IUCN 2019b) examined biodiversity conservation at genetic, species and ecosystem levels across the African continent, concluding that trophy hunting hasn't lived up to its claims to support and pay for conservation.

- Huge, formerly-hunted areas in Africa are now emptied of wildlife and are returning to pastoralism, challenging the trophy hunters' claims that their sport can protect biodiversity and prevent encroachment by farmers (Pinnock, D. 2019b):

    - Chardonnet (IUCN 2019b) found that 40% of the big game hunting zones in Zambia and 72% in Tanzania are now classified as "*depleted*" and useless to hunters, containing no game species.

- In hunting areas in Tanzania that still contain lions, despite a six-year minimum age limit, in 2015, 66.7% of the lions shot were five years old or under. There were simply no lions of the correct age (greater than 6 years old, but even this is a subjective limit – reference paragraph 3.7.3.2) left to be shot.

- In search of trophies, hunting concessions increasingly reply upon target animals wandering, or being lured from the protection of game reserves. This takes place, for example, in the private reserves along the Kruger National Park's unfenced western boundary. In Zimbabwe an outfitter named JWK Safaris states on its website: "*All of the Zimbabwean hunting concessions that JWK Safaris have on offer are open to the adjoined National Parks that serve as feeder parks to the hunting areas*." In 2018 JWK safaris organised to kill the largest elephant hunted in the past 30 years and in 2019 has hunted a rare tusker (an elephant bearing large tusks). Furthermore, there have been the numerous lions lured from Hwange National Park into empty hunting concessions to be killed for trophies (reference paragraph 3.7.3.2.2).

In reality, trophy hunting provides a very poor conservation return, if any (also reference paragraph 3.7.3). Unless there is a change, many targeted species will become increasingly pushed towards extinction (not only by hunting attrition, but also other major factors such as habitat loss and climate change).

> *"Wild game is the continent's version of crude oil—and it too will run out someday. Trophy hunting – the killing of big game for a set of horns or tusks, a skin, or a taxidermied body – has burgeoned into a billion-dollar, profit-driven industry, overseen in some cases by corrupt governments. Many countries in sub-Saharan Africa allow trophy hunting, with varying degrees of transparency and control, establishing yearly quotas meant to reflect the status of species and creating exclusions for highly vulnerable populations"* – National Geographic, 2017

Then there is the deontological argument, that the morality of trophy hunting is in itself unacceptable (reference paragraph 2.4.9) – the lack of trophy hunting's moral/ethical acceptance in today's society is supported by public opinion (reference paragraphs 2.4.1 and 2.4.6).

If future generations are going to see iconic wildlife in the wild (and not just wildlife farmed in captive, synthetic, commercial breeding facilities), there has to be a significant paradigm

shift. Carrying on with 'business as usual' is not going to change anything that gives long-term hope for the survival of vulnerable wildlife species (in the wild).

Removing dependence upon trophy hunting as a form of business profiteering and subsistence income is overdue. Neither CITES, or countries hosting trophy hunting appear to have the will to move away from that dependency. It is upto external countries to send the message that it's time for change.

The UK is placed to send a strong message (by banning all (Option three) hunting trophy imports/exports), that time is running out for targeted and threatened wildlife – if we want to save threatened species, then we first have to stop killing them for "*sport*" and pretending any such attrition is morally, ethically, socially, scientifically justified and acceptable.

5 Bibliography

Abell, J., Kokés, R., & Youldon, D. , 2013 – "*The Long Term Viability of Current Lion Conservation Strategies: A Role for Ex-situ Reintroduction*," Open Science Repository Natural Resources and Conservation

Adams, W.M., 2004 – "*Against Extinction - the story of conservation*," Earthscan UK and USA – ISBN 1-84407-055-7 (hbk), ISBN 1-84407-056-5 (pbk)

Africa Geographic, 2013 – "*South Africa's trophy hunt industry linked to rhino horn trafficking … AGAIN*"

Africa Geographic, 2015 - "*Hunters hold African wildlife to ransom*"

Africa Geographic, 23 March 2015 - "*End of the Game for Namibia*"

Africa Geographic, 2016 - "*South Africa bans leopard trophy hunting for 2016*"

Africa Geographic, 25 October 2017 - "*Questionable killing of Namibia's desert elephants*"

Africa Geographic, 28 October 2019 – "*Opinion - trophy hunting is not all black and white, says conservation biologist*"

African Wildlife Foundation, 2017 - "*African Mammal Trade – A Look at the African Animal and Animal Product Trade*"

Ahmad, A., 2016 - "*The Trophy Hunting Debate – A Case of Ethics*," Department of Political Science, University of Delhi, Economic & Political Weekly, Vol 51, Issue No 26 – 27

Ammann, K., 2015 – "*The CITES permitting system and the illegal wildlife trade*"

Andersson A., Gibson L., Wiley African Journal of Ecology, 13 May 2017- "*Missing teeth: Discordances in the trade of hippo ivory between Africa and Hong Kong*," DOI: 10.1111/aje.12441

Annamiticus, 31 March 2016 – "*Lion culling: A paradox of banning trophy hunting?*"

Bailey, T.N., 1993 – "*The African Leopard; Ecology and Behaviour of a Solitary Felid*," The Blackburn Press, ISBN-10: 1-932846-11-5

Balme, G.; Slotow, R.; Hunter, L., 2009 - "*Impact of conservation interventions on the dynamics and persistence of a persecuted leopard (Panthera pardus) population*," Biological Conservation:142 Vol 11, p. Pages 2681–2690

Batavia, Chelsea, Bruskotter, Jeremy T., Darimont, Chris T., Nelson, Michael Paul, Wallach, Arian D., 56 signatories, 2019 - "*Trophy hunting: Values inform policy*," Science

BBC News, 5 October 2005 – "*Lifeline for Kenya's 'lost' Wilderness*"

BBC Wildlife, April 2007 - "*Tales from the bush - It won't do what is says on the tin*"

BBC News, 23 April 2009 – "*Mara Wildlife in Serious Decline*"

BBC News, 23 September 2016 - "*CITES species meeting: 'The only game in town'*"

BBC News, 30 August 2019 - "*Scientists: Banning trophy hunting 'doesn't protect animals'*"

BBC News , 9 November 2019 – "*EU moves to protect large carnivores*"

BBC News, 21 Nov 2019 – "*Brown bear attacks: Deaths spark fear in Romania*"

Bevan, P; Mercer, C., 2011 - "*Kalahari Dream,*" ISBN 9781466426665

Brink, Henry; Smith, Robert J.; Skinner, Kirsten; Leader-Williams, Nigel, 2016 – *"Sustainability and Long Term-Tenure: Lion Trophy Hunting in Tanzania"*

Born Free Foundation, 31 July 2015 – "*Born Free Renews Call for Decisive Action Following Tragic Death of Cecil the Lion*"

Born Free Foundation, March 2018 – "*Cash before conservation*"

Born Free Foundation, July 2019, "*Trophy Hunting; Busting the myths and exposing the cruelty*"

Bouché, P.; Crosmary, W.; Kafando, P.; Doamba, B.; Kidjo, F.C.; Vermeulen, C.; et al., 2016 – "*Embargo on Lion Hunting Trophies from West Africa: An Effective Measure or a Threat to Lion Conservation?*" PLOS ONE

Caro, T.; Young, C.; Cauldwell, A.; Brown, D., 2009 – "*Animal breeding systems and big game hunting: Models and application*," Biological Conservation

Campaign to Ban Trophy Hunting (CBTH), 2019 – "*Trophy Hunting and Conservation – An assessment of evidence regarding impacts and benefits of sports hunting on wildlife and habitat conservation*"

Campbell, R. 2012. Mane Assumptions: A review of Lindsey et al (2012) -- "*The Significance of African Lions for the Financial Viability of Trophy Hunting and the Maintenance of Wild Land*," a report for the African Lion Coalition, prepared by Economists at Large, Melbourne, Australia

Chapron, Guillaume, López-Bao, José Vicente, 2019 - "*Trophy hunting: Role of consequentialism*," Science

Chase et al., 2016 - "*The Great Elephant Census - Continent-wide survey reveals massive decline in African savannah elephants*," PeerJ ref: DOI 10.7717/peerj.2354

Chase, M., 6 July 2018 - "*Arguments for lifting the ban are unsound*," Elephants Without Borders (EWB), Mmegi-online

Coalition to Stop the Captive Breeding and Keeping of Lions and Other Big Cats for Commercial Purposes, 2019 – "*Public Participation Submission of the Coalition to Stop the Captive Breeding and Keeping of Lions and Other Big Cats for Commercial Purposes - June 2019*"

Congressional Research Service, 2019 – "*International Trophy Hunting*"

Conservation Action Trust, 18 September 2019 – "*Zambian communities halt trophy hunting in dispute over fees*"

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 2007 – "*Captive-bred and ranched specimens 14.69*"

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), eighteenth Conference of Parties (CoP18) – "*Transfer of the population of Ceratotherium simum simum of Namibia from Appendix I to Appendix II*"

Creel, S.; M'soka J.; Dröge, E.; Rosenblatt E.; Becker, M.; Matandiko, W.; et al., 2016 – "*Assessing the sustainability of African lion trophy hunting, with recommendations for policy*," Ecological Applications

Croes, B.; Funston, P.; Rasmussen, G.; Buij, R.; Saleh, A.; Tumenta, P.N.; de Iongh, H.H., 2011 – "*The impact of trophy hunting on lions (Panthera leo) and other large carnivores in the Benoué Complex, northern Cameroon,"* Biological Conservation 144: 3064-3072

Cruise, A., 2018 - "*Umbabat's beloved lion to become trophy hunters' targets*," Conservation Action Trust

Deere, Nicolas J., July 2011 - "*Exploitation or Conservation? Can The Hunting Tourism Industry in Africa Be Sustainable?*" ResearchGate

Department of Environment, Food and Rural Affairs (DEFRA), letter dated 13 November 2018 – '*Ivory Consultation and Elephant Hunting'*

Department of Environment, Food and Rural Affairs (DEFRA), November 2019 - "*Call for evidence on the scale and impacts of the import and export of hunting trophies*"

Department of Environment, Food and Rural Affairs (DEFRA), November 2019 - "*Consultation on controls on the import and export of hunting trophies*"

Department of Environment, Food and Rural Affairs (DEFRA), September 2019 – "*DEFRA responds to Wild Justice challenge: releasing gamebirds on protected sites*"

Dhaka Tribune, 23 October 2019 - "Drought causes more than 150 elephant deaths in Botswana, Zimbabwe"

Dickman, A.; Cooney, R.; Johnson, P.J.; Louis, M.P.; Roe, D.; 128 signatories, 2019 - "*Trophy hunting bans imperil biodiversity*," Science

Dijksma, S (the Netherlands' Minister for Agriculture), 27 October 2015 - "*Dijksma to pursue international ban on trophy hunting*"

Economists at Large, 2013 - "*The $200 million question: How much does trophy hunting really contribute to African communities?*" a report for the African Lion Coalition, prepared by Economists at Large, Melbourne, Australia – IWB, 3 September 2015

Economists at Large, for Humane Society International, 2017 – "*The lion's share? On the economics benefits of trophy hunting*," Conservation Action Trust

European Commission, "*The European Union and Trade in Wild Fauna and Flora*"

EMS Foundation and Ban Animal Trading, 2018 - "*The Extinction Business, South Africa's 'Lion' Bone Trade*"

Endangered Wildlife Trust (EWT) and Centre for Environmental Rights, 2018 – "*Fair Game? Improving the well-being of South African wildlife*"

Environmental Investigation Agency (EIA), 2017 - "*The Lion's Share*"

Environmental Investigation Agency (EIA), 10 August 2017 – "*UK is the largest supplier to the world's ivory markets*"

Environmental Investigation Agency (EIA), 8 November 2018 - "*China's global push for traditional medicine must come with conditions for threatened wildlife*"

Fitzherbert, E; Caro, T.; Johnson, P.J.; Macdonald, D.W.; Borgerhoff Mulder, M., 2014 – "*From avengers to hunters: Leveraging collective action for the conservation of endangered lions*," Biological Conservation

Friedmann, Y; Traylor-Holzer, K. 2008 - "*Leopard (Panthera Pardus) Case Study*," NDF Workshop Case Study

Ginkel, A., 2016 – "*Who's Actually Killing and 'Making a Killing' from Rhino?*," IWB

Gunn, A.S., 2001 - "*Environmental Ethics & Trophy Hunting*," Ethics & the Environment, 6, 68–95

Harvey, R., 2018 – "*The Economics of Captive Predator Breeding in South Africa*" – South African Institute of International Affairs (SIIA)

Harvey, R., 20 September 2019 – "*Trophy hunting is not sustainable*," Ecologist (IWB)

Hansard, 2015 – "*UK Parliamentary Debate, African Lion Numbers*"

Highland Titles - Highland Titles

House Committee on Natural Resources, 2016 – "*Missing the Mark – African trophy hunting fails to show consistent conservation benefits*"

Hunter, L.T.; White, P.; Henschel, P.; Frank, L.; Burton, C.; Loveridge, A., et al., 2013 "*Walking with lions: Why there is no role for captive-origin lions Panthera leo in species restoration*," ORYX, 47, 19–24

International Union for Conservation of Nature (IUCN), Red List of Endangered Species - IUCN Red List

International Union for Conservation of Nature (IUCN), 2006 – "*Conservation Strategy for the lion (Panthera leo) in Eastern and Southern Africa*"

International Union for Conservation of Nature (IUCN)/PACO, 2009 - "*Big Game Hunting in West Africa, What is its Contribution to Conservation?*" ISBN: 978-2-8317-1204-8

International Union for Conservation of Nature (IUCN), 2016 – "*Informing decisions on trophy hunting: A Briefing Paper for European Union Decision-makers regarding potential plans for restriction of imports of hunting trophies*," Roe, D.; Cremona, P.

International Union for Conservation of Nature (IUCN), 2016 – "*WCC-2016-Res-013-EN Terminating the hunting of captive-bred lions (Panthera leo) and other predators and captive breeding for commercial, non-conservation purposes*"

International Union for Conservation of Nature (IUCN), 2019a - "*Compatibility of Trophy Hunting as a Form of Sustainable Use with IUCN's Objectives*" - This report has been provided by the following members of the World Commission on Environmental Law (WCEL) Ethics Specialist Group (ESG), Professors of environmental law: Bosselmann, K; Burdon, P; Taylor, P.; Stewart, N.; Kotzé, L.; Waikavee, T.

International Union for Conservation of Nature (IUCN), 2019b – "*Africa is changing: Should its protected areas evolve? Reconfiguring the protected areas of Africa*," Chardonnet, B

International Wildlife Bond (IWB), 2 September 2015a - "*The economics of poaching, trophy and canned hunting*"

International Wildlife Bond (IWB), 17 December 2015b - "*Are lion trophy hunting quotas based on science?*"

International Wildlife Bond (IWB), 22 December 2015c – "*"Lions are now protected under the endangered species act," USFWS - Really?*"

International Wildlife Bond (IWB), 5 January 2016a - "*How can 'we' save the African lion, panthera leo?*"

International Wildlife Bond (IWB), 7 March 2016b - "*The 'Theatre' of Wildlife Decimation*"

International Wildlife Bond (IWB), 16 March 2016c – "*Trophy hunting and conservation*"

International Wildlife Bond (IWB), 29 March 2016d - "*9 Myths About Captive-bred Lions"*

International Wildlife Bond (IWB), 8 July 2016e - "*Canned duplicity and decline*"

International Wildlife Bond (IWB), 22 July 2016f - "*"A Case of Ethics" – How Can Trophy Hunting Be 'Acceptable?'*"

International Wildlife Bond (IWB), 3 October 2016g – "*Another Missed Opportunity by CITES*"

International Wildlife Bond (IWB), 8 February 2017a, "*Leopard hunting in South Africa*"

International Wildlife Bond (IWB), 30 November 2017b, "*Open letter to Secretary Zinke: The African Lion Conservation Community's Response*"

International Wildlife Bond (IWB), 2 June 2018a – "*Zambia's proposed hippo cull*"

International Wildlife Bond (IWB), 28 August 2018b – "*Giraffe being trophy hunted to supply United States Markets*"

International Wildlife Bond (IWB), 13 December 2018b, "*UK Ivory Bill to Receive Royal Assent*"

International Wildlife Bond (IWB), 2 July 2019a - "*Trophy Hunting and Cecil's Anniversary*"

International Wildlife Bond (IWB), 7 August 2019b – "*High Court Rules in Favour of Lions and NSPCA*"

International Wildlife Bond (IWB), 2 September 2019c - "*Rhino Horn Trade – Public Consultation*"

International Wildlife Bond (IWB), 21 October 2019d – "*Animal Farm*"

Kamhorst, D; Koopmanschap, E.; Oudwater, N., 2007 - "*Effective participation in wildlife management in Zimbabwe's CAMPFIRE programme*," Journal European Journal of Agricultural Education and Extension, Vol 4 - Issue 3

Kiffner C.; Meyer, B.; Muhlenberg, M.; Waltert, M., 2009 – "*Plenty of prey, few predators: what limits lions Panthera leo in Katavi National Park, western Tanzania?*" Oryx, Cambridge University Press

Knell, R.J.; Martínez-Ruiz, C., 2017 – "*Selective harvest focused on sexual signal traits can lead to extinction under directional environmental change*," The Royal Society

Lewis, D.; Jackson, J., 2005 – "*Safari hunting and conservation on communal land in southern Africa,*" Pages 239–251 in R. Woodroffe, S. Thirgood, and A. Rabinowitz, editors. People and wildlife: conflict or coexistence? Cambridge University Press, Cambridge, United Kingdom.

Lewison, R.L. 2007 - "*Population responses to natural and human-mediated disturbances: Assessing the vulnerability of the common hippopotamus (Hippopotamus amphibius)*," *African Journal of Ecology* 45: 407-415.

Lindsey, P.A.; Roulet, P.A.; Romanch, S.S., 2006 – "*Economic and conservation significance of the trophy hunting industry in sub-Saharan Africa*," Biological Conservation

Lindsey, P.A.; Frank, L.G.; Alexander, R.; Mathieson, A; Romanach, S.S., 2007 – "*Trophy hunting and conservation in Africa: problems and one potential solution*," ResearchGate

Lindsey, P.A et al. 2008 - "*Trophy Hunting in Sub Saharan Africa : Economic Scale and Conservation Significance*"

Lindsey, P.; Balme, G.; Booth, V.; Midlane, N., 2012 - "*The significance of African lions for the financial viability of trophy hunting and the maintenance of wild land*," PLoS ONE

Lindsey, Peter Andrew; Balme, Guy Andrew; Funston, Paul; Henschel, Phillip; Hunter, Luke; Madzikanda, Hilary; Midlane, Neil; Nyirenda, Vincent, 2013a - "*The Trophy Hunting of African Lions: Scale, Current Management Practices and Factors Undermining Sustainability*," PLoS One

Lindsey, P.A.; Balme, G.; Becker, M.; Begg, C.; Bento, C.; Bocchino, C.; Dickman, A.; Diggle, R.W.; Eves, H.; Henschel, P.; Lewis, D.; Marnewick, K.; Mattheus, J.; McNutt, J.W.; McRobb, R.; Midlane, N.; Milanzi, J.; Morley, R.; Murphree, M.; Opyene, V.; Phadima, J.; Purchase, G.; Rentsch, D.; Roche, C.; Shaw, J.; Van der Westhuizen, H.; Van Vliet, N.; Zisadza-Gandiwa, P., 2013b – "*The bushmeat trade in African savannas: Impacts, drivers, and possible solutions*," Biological Conservation 160: 80-96.

Lindsey, P.A.; Petraccaac, L.S.; Funston, P.J.; Bauer, H.; Dickman, A.; Everatte, K.; Flyman, M.; Henschel, P.; Hinks, A.E.; Kasikig, S.; Loveridged, A.; Macdonal, D.W.; Mandisodzah, R.; Mgoolai, W.; Miller, S.M.; Nazeralil, S.; Siegem,L.; Uisebn, K.; Hunter, L.B.T., 2017 - "*The performance of African protected areas for lions and their prey*," Science Direct

LionAid, 5 January 2016 – "*The Bubye Conservancy lion trophy hunting raffle - the background*"

Live Science, 20 November 2017 – "*Ban on US Import of Elephant Trophies Remains, For Now*"

Loveridge, A.; Reynolds, J.C.; Milner-Gulland, E.J.,2006 "*Does sport hunting benefit conservation?*"

Loveridge, A.; Searle, A.; Murindagomo, F.; Macdonald, D., 2007 – "*The impact of sport-hunting on the population dynamics of an African lion population in a protected area*," Biological Conservation

Loveridge A.J., Packer C. & Dutton A. (2009) – Dickinson B., Hutton J. & Adams W.M. (Eds.), "*Recreational Hunting, Conservation and Rural Livelihoods: Science and Practice*," Oxford: Wiley-Blackwell Press, p 108 – 124.

Loveridge, A., 2018 – "*Lion Hearted – The Life and Death of Cecil & The Future of Africa's Iconic Cats*," econISBN 978-168245120-5

Maas, B., 2016 - "*A quantitative assessment of supply and demand in rhino horn and a case against trade*," NABU International, Berlin

Mbaiwa, J.E., 2015 – "*Effects of the Safari Hunting Tourism Ban on Rural Livelihoods and Wildlife Conservation in Northern Botswana*"

Milner, J. M. et al., 2007 - "*Demographic Side Effects of Selective Hunting in Ungulates and Carnivores*," Conservation Biology, vol. 21, no. 1, pp. 36-47

Monbiot, G., 2013 – "*Feral – Searching for enhancement on the frontiers of rewildling*" – ISBN 978-1-846-14748-7

National Geographic, 17 November 2015 - "*Is Trophy Hunting Helping Save African Elephants?*"

National Geographic, 2017 – "*Trophy Hunting: Should We Kill Animals to Save Them? - Trophy hunting fees help fund conservation. Critics say the benefits are exaggerated and that killing big game animals is wrong*"

National Geographic, 21 November 2019 – "*Exclusive: Inside a controversial South African lion farm*"

National Wildlife Crime Unit (NWCU), 25 September 2019 – "*Taxidermist guilty of fraud and illegal trade in endangered species*"

Nature Needs More, 17 July 2019 – "*Three steps to modernise CITES*"

Nature needs More, 22 September 2019 – "*Nature Needs More, "In 44 Years, CITES And IUCN Have Provided NO Proof Sustainable Use Is Working*"

Nicholls, K.; Ward, J.L.; Kat P.W. - "*African lion trophy hunting policy cannot be based on a site-specific model*"

Nowak, Katarzyna, Lee, Phyllis C., Marino, Jorgelina, Mkono, Mucha, Mumby, Hannah, Dobson, Andrew, Harvey, Ross, Lindsay, Keith, Lusseau, David, Sillero-Zubiri, Claudio, 71 signatories, 2019 - "*Trophy hunting: Bans create opening for change*"

Ogutu, J., 2016 "*Kenya's Wildlife Populations Are Declining Markedly as Livestock Numbers Grow*," PloS One

Otuoma, J.; Kingamario, j.; Ekaya, W.; Kshatriya, M.; Nyabengi, M., 2009 – "*Effects of human – livestock – wildlife interactions on habitat in an eastern Kenyan rangeland*" - British Journal of Zoology, Blackwell Publishing ltd.

Oxford University, Wildlife Conservation Research Unit (WildCRU), Macdonald, Professor David et al., 2016 – "*Report on Lion Conservation with Particular Respect to the Issue of Trophy Hunting*," IWB

PACEC, 2016 - "*The Contribution of Deer Management to the Scottish Economy*"

Packer. C; Kosmala, M.; Cooley, H.S.; Brink, H.; Pintea, L.; Garshelis, D. et al., 2009 - "*Sport hunting, predator control and conservation of large carnivores*," PLoS ONE

Packer C.; Brink H.; Kissui, B.M.; Maliti H.; Kushnir, H.; Caro, T., 2011 - "*Effects of trophy hunting on lion and leopard populations in Tanzania*," Conservation Biology

Packer, C.; Loveridge, A.; Canney, S.; Caro, T.; Garnett, S.T.; Pfeifer, M.; Zander, K.K.; Swanson, A.; MacNulty, D.; Balme, G.; Bauer, H.; Begg, C.M.; Begg, K.S.; Bhalla, S.; Bissett, C.; Bodasing, T.; Brink, H.; Burger, A.; Burton, A.C.; Clegg, B.; Dell, S.; Delsink, D.; Dickerson, T.; Dloniak, S.M.; Druce, D.; Frank, L.; Funston, P.; Gichohi, N.; Groom, R.; Hanekom, C.; Heath, B.; Hunter, L.; DeIongh, H.H.; Joubert, C.J.; Kasiki, S,M.; Kissui, B.; Knocker, W.; Leathem, B.; Lindsey, P.A.; Maclennan, S.D.; McNutt, J.W.; Miller, S.M.; Naylor, S.; Nel, P.; Ng'weno, C.; Nicholls, K.; Ogutu, J.O.; Okot-Omoya, E.; Patterson, B.D.; Plumptre, A.; Salerno, J.; Skinner, K.; Slotow, R.; Sogbohossou, E.A.; Stratford, K.J.; Winterbach, C.; Winterbach H.; Polasky, S., 2013 – "*Conserving large carnivores: dollars and fences*," Wiley Online Library

Packer, C. - "*Lions in the Balance*," 2015, ISBN-13: 978-0-226-09295-9

Pinnock, D., 5 July 2018a – "*Digging for the truth about Skye*," Daily Maverick

Pinnock, D., 19 July 2018b - "*Dodgy skeleton traders and lion slaughterhouses exposed in damning report*" - Daily Maverick

Pinnock, D., 25 April 2019a – "*Trophy hunting, part one: The nasty colonial sport of shooting wild animals*" - Daily Maverick, IWB

Pinnock, D., 30 April 2019b – "*Trophy hunting part two: End-of-the-game*" – Daily Maverick, IWB

Pinnock, D., 11 December 2019c – "*Bad Shot - Outrage over 'unethical' Botswana elephant hunt*," Daily Maverick, 11 December 2019

Peirce, Richard, 2018 – "*Cuddle Me, Kill Me*," ISBN 978-1-77584-593-5

Pogge, T., 2008 – "*World Poverty & Human Rights*," 2nd edition, Cambridge: Polity Press

Quartz Africa, 5 October 2017 – "*Hippos are being pushed towards extinction by an insatiable demand for their teeth*"

Republic of South Africa, 1998 – "*Animal Improvement Act 62. of 1998*"

Republic of South Africa, 29 November 2010 - "*The Supreme Court of Appeal of South Africa Judgement - Case No. 72/10*"

Republic of South Africa, 13 November 2018 – "*Report of the Portfolio Committee on Environmental Affairs on the Colloquium on Captive Lion Breeding for Hunting in South Africa: harming or promoting the conservation image of the country, held on 21 and 22 august 2018, dated 8 November 2018*"

Republic of South Africa, Department of Environmental Affairs (DEA) – "*Lion Management in South Africa*"

Republic of South Africa, Department of Environmental Affairs (DEA), 16 January 2017 - "*Department of Environmental Affairs confirms extension of zero quota for leopard hunting in South Africa*"

Republic of South Africa, Department of Environmental Affairs (DEA), 28 June 2017 – "*Lion export quota for 2017 communicated to the CITES Secretariat in line with CITES requirements*"

Republic of South Africa, Department of Environmental Affairs (DEA), September 2018 - *"Leopard Quota Review: South Africa"* (AC30 Doc 15. Annex 3)

Republic of South Africa, The High Court of South Africa, Gauteng Division, Pretoria, 6 August 2019 – "*Judgment Lion Bone Case (Case No. 86515/2017)*"

Riggio, J.; Jacobson, A.; Dollar, L.; Bauer, H.; Becker, M.; Dickman, A. et al., 2012 - "*The size of savannah Africa: a lion's (Panthera leo) view*," Biodiversity and Conservation

Roe, D.; Cremona, P., 2016 – "*Informing decisions on trophy hunting: A Briefing Paper for European Union Decision-makers regarding potential plans for restriction of imports of hunting trophies*," IUCN

Rosenblatt, E.; Becker, M. S.; Creel, S.; Droge, E.; Mweetwa, T.; Schuette, P. A.; Watson, F.; Merkle, J.; Mwape, H., 2014 – "*Detecting declines of apex carnivores and evaluating their causes: An example with Zambian lions*," Biological Conservation 180: 176-186.

Royal Commission on Environmental Pollution, Turning the Tide

Selier, S.A.G., Di Minin, E., 2015 - "*Monitoring for Effective Sustainable Use of Wildlife*," Animal Conservation, vol. 18 (2015), pp. 131-132.

Skye Report, 2018 – "*The Controversial lion Hunt in Umbabat – South Africa*"

SmartNews, 7 March 2018 – "*US lifts ban import of African elephant trophies*"

Southwick Associates For Safari Club International Foundation, 2015 – "*The Economic Contributions of Hunting-Related Tourism in Eastern and Southern Africa*"

Stapelkamp, B., 7 December 2016 - *"Comments on WildCRU's report on lion hunting!"* reference Appendix 1

Stapelkamp, B., - Soft Foot Alliance's "*Mobile Bomas*" project

Swanepoel, L.; Lindsey, P.; Somers, M.J.; Van Hoven, W.; Dalerum, F., 2014 - "*The relative importance of trophy harvest and retaliatory killing of large carnivores: South African leopards as a case study*," *South African Journal of Wildlife Research,* pp. 115 - 134, 2014.

Taylor, A.; Balfour, D.; Kirsty, D.; Rynette, B.; Davies-Mostert, C.H.; Lindsey, P.A.; Shaw, J.; 't SasRolfes, M., 2017 – "Sustainable rhino horn production at the pointy end of the rhino horn trade debate," Biological Conservation (Vol. 216, page 60 - 68)

The African Lion Conservation Community, 2017 - "*Open letter to Secretary Zinke: The African Lion Conservation Community's response to the South African Predator Association's letter*"

The Conversation, 14 November 2019 – "South Africa struggles to manage wildlife ranching: why it's a problem"

The Daily Mail, 27 April 2019 - "Horror of lion farms exposed: Year-long investigation reveals sickening trade and ends with a dramatic rescue"

The European Union (EU), Wildlife Trade Regulations (WTR) – "The Differences between EU and CITES Provisions in a Nutshell"

The European Commission, 20 January 2017 "COMMISSION REGULATION (EU) 2017/160 of 20 January 2017 amending Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein," Official Journal of the European Union

The Express, 2 September 2019 – "Campaigners attack 'inhuman' hunters as hundreds of animals return to the UK as trophies"

The Financial Times, 2019 – "Trophy assets: lion prices, dead or alive," Opinion Lex

The Guardian, 25 November 2011 -"'Cure for cancer' rumour killed off Vietnam's rhinos"

The Guardian, 19 September 2014 – "Rewilding Britain: bringing wolves, bears and beavers back to the land"

The Guardian, 13 March 2015a – "Australia bans hunting trophies from lions entering or leaving the country"

The Guardian, 19 November 2015b – "France bans imports of lion hunt trophies"

The Guardian, 23 July 2017 – "The lynx effect: are sheep farmers right to fear for their flocks?"

The Guardian, 8 April 2018 - "One man's plan to let wolves roam free in the Highlands"

The Guardian, 11 August 2019a - "'Eagles need to eat too': grouse moors take new approach to shooting

The Guardian, 12 September 2019b - "Defra to review release of game birds after legal threat"

The Guardian, 8 November 2019c – "'Greta Thunberg effect' driving growth in carbon offsetting - NGOs report fourfold increases in investments in carbon-reducing projects in developing countries"

The Independent, 29 July 2019a – "*Trophy hunters paying to shoot 100 puffins at a time during trips to Iceland*"

The Independent, 20 August 2019b – "*British trophy-hunters legally killed 500 African monkeys and baboons in 30 years*"

The Independent, 22 October 2019c – "*More than 50 elephants starve to death amid severe drought in Zimbabwe*"

The Royal Society, Nilsen, E.B.; Milner-Gulland, E.J.; Schofield, E.; Mysterud, A.; Chr Stenseth, N.; Coulson, T., 2007 – "*Wolf reintroduction to Scotland: public attitudes and consequences for red deer management*"

The Southern Africa Tourism Services Association (SATSA), 2019 - "*Evaluating Captive Wildlife Attractions & Activities*"

The Spectator, 12 October 2019 - "*The commercialisation of shooting may kill the whole sport*"

The Telegraph, 9 August 2013 - "*Chile: on the trail of the elusive puma*"

The Telegraph, 3 October 2019 - *"Anti-hunting groups seek to oust big-game hunters from global conservation body*

Thorup, S.H.; Jensen, J-K.; Petersen, K.T.; Kasper, D.B., 2014 - "*Færøsk Trækfugleatlas. The Faroese Bird Migration Atlas,"* Faroe University Press, Tórshavn

TRAFFIC, 2008 – "*South Africa freezes rhino horn trade*"

TRAFFIC; WildCRU, 2015 – "*Bones of Contention: An assessment of South African trade in African lion bone and other body parts*"

TRAFFIC, 2016 - "*South Africa reports small decrease in rhino poaching, but Africa-wide 2015 the worst on record*"

United Kingdom, Parliament – 13 November 2018 – "*Trophy Hunting*," Early Day Motion 1829

United Nations Environment Program (UNEP), 2012a – "*GEO5 Global Environment Outlook: Summary for Africa*"

United Nations Environment Programme (UNEP) - World Conservation Monitoring Centre (WCMC), (UNEP - WCMC), 2014, CITES lion gross exports 2005-2012

United Nations Environment Program (UNEP) - World Conservation Monitoring Centre (UNEP-WCMC), 2015 - "*Review of Panthera Leo from the United Republic of Tanzania and from Zambia*"

United Nations (UN), Department of Economic and Social Affairs, Population Division, 2015 - "*World Population Prospects: The 2015 Revision, Key Findings and Advance Tables,"* Working Paper No. ESA/P/WP.241.

United Nations (UN), (2013) - "*World Population Prospects: The 2012 Revision, Vol. II, Demographic Profiles*," (ST/ESA/SER.A/345).

United Nations (UN), Department of Economic and Social Affairs, Population Division, 2015 - "*World Population Prospects: The 2015 Revision, Key Findings and Advance Tables,"* Working Paper No. ESA/P/WP.241.

United Nations Office on Drugs and Crime, 2016 - "*World Wildlife Crime Report - Trafficking in protected species*"

United States Fish and Wildlife Service (USFWS), 1 March 2018 - "*Memorandum – Withdrawal of certain findings – ESA listed species sport hunted trophies*"

Whitman, K.; Starfield, M.; Quadling, S.; Packer, C., 2004 – "*Sustainable trophy hunting of African Lions*," Nature

Whitman, K.; Packer, C., 2006 – "*A hunter's guide to aging lions in eastern and southern Africa*," Conservation Force

Wild Justice, 12 September 2019 – "*Impacts of non-native gamebird releases need to be assessed – another success for Wild Justice*"

Williams, S.T.; Williams, K.S.; Lewis, B.P.; Hill, R.A., 2017 – "*Population dynamics and threats to an apex predator outside protected areas: implications for carnivore management*," Royal Society Open Science

Williams, V.L.; Loveridge, A.J.; Newton, D.J.; Macdonald, D.W, 2017 – *"A roaring trade? The legal trade in Panthera leo bones from Africa to East-Southeast Asia*"

Williams, V. L.; Sas-Rolfes, M. J., 2019, "*Born captive: A survey of the lion breeding, keeping and hunting industries in South Africa*," PLoS ONE

6 Figures

Figure 14 - 'Canned' lions being underfed in declining facilities – "Photos emerge of malnourished lions on breeding farm," Africa Geographic, 8 July 2016 – Source: Big Cat Conservation

Appendix I - Brent Stapelkamp's (ex-WildCRU project in Hwange, Zimbabawe)

7 December 2016 - Facebook - Brent Stapelkamp

Comments on WildCru's report on lion hunting!

Much has been said about the recently released report on Lion hunting by WildCRU and I have added my comments here in the hope that the British government get to hear another perspective. Here it is!

I must say that I found the report heavily hunting biased and I don't see that it so much "*grasping the moment to create a movement*" as much as "*grasping the moment to maintain the momentum*."

Where the author says that he and his co-contributors are neither "*pro*" nor "*anti-hunting*" but "*pro-fact*", I feel the report lands on the pro-hunting side purely because it doesn't take into account all of the facts.

During my decade or so with the WildCRU project in Hwange, specializing in the conflict mitigation but having a central [role] in the ecological study as well as the trophy hunting one, I have been at the coalface and feel I have a deeper appreciation of these facts than the data may show. Years ago for instance I spotted a pattern that occurs after a pride male is trophy hunted on the park boundary. Within a few short weeks new male/males appear and the females within that territory have two choices. The first is that they stand and fight in which case they are either killed themselves or their Cubs are and that is the infanticide that the report describes. From my experience of Hwange, that rarely happens for the lionesses are typical mothers and rather flee with their Cubs. They have nowhere else to go (within the park all territories are full of potential cub killers) but out of the park and amongst people. There they kill livestock (for want of wild prey) until either they die or their Cubs do and the survivors return to the park and settle with the new males. They conceive and all is well until....you guessed it! The next hunting season has started. And the process repeats itself. I know that WildCRU have these data as I was the man instructed to collar all adults in the story chain year in and year out so that we could record this effect and publish it. There are lionesses in some areas that have had 4 or more litters and never raised a single cub to adulthood being stuck in this trap. Where the author repeatedly says that trophy hunting isn't the main source of mortality to lions (despite Loveridge finding it was in western Zimbabwe

in 2016) it is certainly a driver of conflict! If indeed it drives conflict then the data shown in Figure 2 (lion threats ranked) can be looked at with fresh eyes. Imagine then if we took the trophy hunting data and added it to the conflict!

We have seen this pattern elsewhere in Zimbabwe and I urge you all to have a look at your conflict peaks with fresh eyes and see if a pride male was hunted just prior to it.

I have lived this pattern for years from shaking the happy American's hand in the skinning shed while collecting the collar to going to meetings where every villager is armed with an axe because he heard "*the owner of the lions is here!*" The conflict can be severe and last several months and the damage that does to the lion's image is immeasurable. No wonder Mr Nzou (referenced in the report) said we don't cry for lions and the author uses that (as many hunters here do) to justify lion hunting.

I don't think that all the facts are being considered!

The author goes onto say there is little evidence that trophy hunting substantial negative effects at a national and regional level, and where it is well regulated and devotes sufficient authority to the land owners has the potential to contribute to lion conservation. Is that lack of evidence because of a weakness in the data collection or because of a bias towards analysis of data that pleases the issuer of your permits? Over the years I know that parks permits were always the worry and indeed "*rocking the boat*" was seen as jeopardizing them plus there were long periods without permits where no monitoring was happening for up to a year at a time. To put too much emphasis on the [seeming] lack of evidence again is missing the point.

Surely Zimbabwe is viewed as "*one of the well-regulated ones?*" A country that the British government itself describes as one of the most corrupt countries in the world? A place where the Land owners are given "*sufficient authority*" over its management and yet here we debate -post Cecil!

My point is even in the best example we can't manage lion hunting properly so we should go with the cautionary principle and stop it immediately before we lose our lions.

Bubye Valley Conservancy is promoted as a successful example in the appendices because they have seen "*an exponential increase*" in lion numbers there. The management of the Bubye, as well as the report, make it clear that there is no viable alternative to hunting but go onto say that they have a higher lion density than anywhere else in Africa! I had a personal attack from a hunter at Bubye who told me that he sees 3 or 4 prides of lions in a day there

without telemetry, not to mention the rhino and the elephant and the wild dogs etc. sounds to me like the best possible photographic safari location don't you think?

I wrote a fun little piece called "*the quality street theorem*" that, if you google it, will explain my understanding of hunters' attachment to lion hunting.

I argued with the hunter from the Bubye that where his only measure of successful lion management was numbers or density it was not a successful example in my opinion. I told him that a double fenced area was never going to be repeatable over African lion range and that fortress conservation doesn't work. The author mentions the fact that the human population will virtually double in the next few decades and that that would mean more pressure on resources and I agree but to me places like Bubye are desperately vulnerable to other pressures not mentioned in the report. With a population increase coming, politicians will be under pressure to satisfy land hungry voters and what is more vulnerable to the whims of those politicians than an elitist white enclave that only benefits their elitist clients? Look at the Save conservancy!

If lions are to survive this tidal wave coming, we need to blur the lines not redefine them and we do that, not by supplying thousands of kilograms of meat a month to the people but by involving them in not only the profits but the decision making!

Bubye should not be lauded as a success in a modern African context.

And finally, the Author references Campfire and says that [findings] suggest that if trophy hunting was to become unviable in Zimbabwe that thousands of households would lose [their] benefits from the scheme. Campfire is a "*four letter word*" here on the peripheries of the protected areas precisely because the people see no benefit whatsoever. To mention campfire in a community meeting is to invite being chased away with sharp objects! The corruption so deeply entrenched in our wildlife policies and systems [it] is going to take years to sort out and honestly speaking our lions don't have the luxury of time!

Let's use the precautionary principle and find alternatives. Let's create a movement and not maintain the momentum.

Appendix 2 - Table 1 – Overview of Lion Sub-population Numbers, Africa

(IUCN 2015 Assessment and WildCRU 2016)

Country	**1993 Est.** (1)	**2014 Est.** (1)	**2016 Est.**	**% Change 1993 – 2014**	**Current Government Guesstimate of Total Population**	**EU Assess. (2015) approx.**	**Expected Government Quota (2016/17)**	**Possible Quota % of Remaining Population**	**Notes**	**Assessment**
Benin	25	108		+332%	?		5 (2009) "Off-take" 2±0.4 (2007 - 2009)	5%? "Off-take" age restrictions still pending.	Also see Burkina Faso.	Small population < 500
Botswana	2,235	1,663	2,800[7]	-26%	?		No Trophy Hunting 2001 – 04 2008 - present		3 pop. considered, 1 declined.	Retaliatory killings highlighted in the past.
Burkina Faso	76	63		-17%	?		6 (2015/16) 20 (2014/15) "Off-take" 13.3±1.45 (2006 - 2009)	10%? "Off-take" age restrictions still pending.	1 pop. considered, overlapping with Benin and Niger.	

							> 1 lion per 2,000 km^2			
Cameroon	322	220		-32%	?		No Trophy Hunting		2 pop. considered, 2 declined.	
Central African Republic	-	-		-	?		31 (2009) "Off-take" 13.7±6.9 (2008 – 2011)	?		
Côte d'Ivoire	265	0		-100%	?		No Trophy Hunting			
DRC	-	-		-	?		Lion Hunting Legally Permitted			
Ethiopia	-	-		-	?		Dangerous Animals Only Legally Permitted			
Ghana	131	0		-100%	?		No trophy Hunting			

Kenya	748	449		-40%	2,280 (2004 est.)		No Trophy Hunting	N/A	7 pop. considered, 5 declined.	Habitat and prey loss apparent.
Mali	-	-		-	?		Lion Hunting Legally Permitted			
Malawi	-	-		-		34[6]				
Mozambique	339	1,235	1,500[7]	+264%	?		42 – 60 (2013) "Off-take" 19.2±7.3 (2008 – 2011)	5% < 1 lion per 2,000 km^2 Males ≥ 6 years old introduced, but full conservation strategy commitment due.	1 pop. considered.	
Namibia	514	725	750[7]	+41%	?		15 (2010) "Off-take" 14.0±3.2 (2008 – 2011)	2%	3 pop. considered, 1 declined.	Population too close to minimum 500 thresholds for sustainability?

							> 1 lion per 2,000 km^2			
Nigeria	284	32		-89%	?	34[(6)]	No Trophy Hunting			
Senegal	201	16		-92%	?	16[(6)]	No Trophy Hunting			
Somalia	-	-		-	?		Lion Hunting Legally Permitted			
South Africa	1,946	2,074		+7%	2,000 - 2,500		No Wild Lion Hunting Quotas Set "Off-take" 'Canned' lions 400 est. (2014)		10 pop. considered, 1 declined.	However, Trophy Hunting of 7,000 'canned' lions permitted.
South Sudan	-	-		-	?					
Sudan (prior to secession of S Sudan)	-	-		-	?					

Tanzania	1,787	608		-66%	16,800[3]? (2010)	608[2]	250 – 300 (2013/14) 50 (2013) 315 (2012) "Off-take" 165 (2008) 42 (2014)	>2% Current total lion population unknown	5 pop. considered, 4 declined.	Current total lion population unknown, but -66% sub-population decline noted.
Togo	-	-		-	?		Lion Hunting Legally Permitted			
Uganda	577	209		-64%	?		Dangerous Animals Only Legally Permitted		2 pop. considered, 2 declined.	
Zambia	139	100	1,200[7]	-28%	1,500 – 2,500[4]	307 – 465[5]	50 (2013) Lion Trophy Hunting to be re-introduced for 2016/17 season. 24 (2016)	>= 8%? Current total lion population unknown	1 pop. considered.	Decline evident and no science behind hunting quota setting.

							No age limit restriction evident. $>$ 1 lion per 2,000 km^2			
Zimbabwe	52	703	1,500[(7)]	+1252%	?		50 (2015) 101 (2014) "Off-take" 42.5$\pm$7.5 (2008 – 2011) $>$ 1 lion per 2,000 km^2	7% Males $\geq$ 6 years old now introduced	5 pop. considered.	Is hunting quota still too high? Population too close to minimum 500 thresholds for sustainability?

Notes:

(1) IUCN Red List Information, http://www.iucnredlist.org/details/full/15951/0

(2) Based on five monitored sub-populations (Ngorongoro Crater, Katavi, Matambwe (Selous GR), Serengeti and Tarangire) – Noted by Bauer et al. (2015) noted "that these study subpopulations do not necessarily represent total site populations."

(3) The Tanzanian Ministry of Natural Resources and Tourism, chose to cite to UNEP-WCMC a 2006 (Ikanda and Packer) estimate of total population of 17,564, but the Tanzanian Wildlife Division 'accepted' the estimate of 16,800 (Mésocina et al., 2010), or a 5% decline between 2006 and 2010. So, it is assumed that this latter 'estimate' is the Tanzanian Governments' current 'belief.' This 'belief' is also based, in-part on "operators" with a vested interest in setting lion population estimates and "offtake" quotas high. The actual "offtake" cited by the Ministry of Natural Resources and Tourism to UNEP-WCMC, 2015, was "168 in 2008" and "42 in 2014" the reduction "possibly" due to continued population declines (Lindsey et al., 2103; Nelson et al., 2013).

(4) The Zambian Government/Authorities failed to reply to UNEP-WCMC on how they had arrived at their 'estimates,' but it should be noted that quotas are based, in-part on operators' recommendations – not verifiable science, but on "operators" with a vested interest in setting lion population estimates and "offtake" quotas high.

(5) The EU assessment of Zambia's lion population in Kafue (Midlane et al., 2015), South Luangwa (Rosenblatt et al., 2014) and Lower Zambezi (Becker et al., 2013).

(6) LionAid

(7) Dickman in prep., WildCRU – WildCRU - "Report on Lion Conservation with Particular Respect to the Issue of Trophy Hunting," Professor David Macdonald (Director of WildCRU) et al., dated 28 November 2016

(8) Bauer/IUCN 2016 - WildCRU - "Report on Lion Conservation with Particular Respect to the Issue of Trophy Hunting," Professor David Macdonald (Director of WildCRU) et al., dated 28 November 2016

Table 2 – Application of Regional Trends to Two Sets of African Lion Population Estimates

	Estimated Lions in 2002		Estimated Lions in 2014 applying regional trends data (IUCN Table 2) (Note 1)	
Region	**Bauer and van der Merwe (2004)**	**Chardonet (2002)**	**Bauer and van der Merwe (2004)**	**Chardonet (2002)**
Southern Africa*	9,946	15,251	10,385	15,925
Eastern Africa**	11,112	20,144	7,345	13,316
West Africa***	835	1,163	406	406
Central Africa***	950	2,815	590	1,748
Total lions	**22,843**	**39,373**	**18,726**	**31,395**

Notes:

1. http://www.iucnredlist.org/details/full/15951/0

*Although Mozambique's Niassa subpopulation is excluded from the regional trend calculation, estimates of its population size are included in both 2002 inventories.

** Chardonnet included estimates for several large areas where Bauer and van der Merwe did not, due to lack of information. The most substantial are Tanzania's Lion subpopulations of Ruaha and Tarangire, estimated by Chardonnet at 5,244. Tanzania's Selous subpopulation

was originally grouped with Southern African Lion subpopulations by Chardonnet, but moved here to East Africa to maintain consistent regional groupings by country.

*** Trend applied to Central Africa only, West Africa totals from Henschel et al. (2014).