



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

Dr M Molefe  
Director: Veterinary Public Health  
Department of Agriculture, Land Reform and Rural Development (DALRRD)  
Private Bag X138  
Pretoria  
001  
South Africa

27 April 2020

Dear Dr M Molefe,

**'Meat Safety Act, 2000 (Act No. 40 of 2000) – Proposed Update to Schedule 1, Section 1(2)'**

Please find below *"written comments"* as requested for submission in Government Notice 201 of 2020 *"proposed update to Schedule 1, as provided in section 1(2) of the Meat Safety Act, 2000 (Act No. 40 of 2000), listing animals to which the Act applies"* as notified in Government Gazette, No. 43050, Department of Agriculture, Land Reform and Rural Development, dated 28 February 2020.

An extension to the 60-day submission deadline was requested from the DAFF, due to the potential impacts of the coronavirus (COVID-19) pandemic – but, no confirmation of an extension was forthcoming.

Please find International Wildlife Bond's (IWB's) submission here within (submitted by e-mail to [VPH@daff.goc.za](mailto:VPH@daff.goc.za)).

Yours sincerely,

Stephen Alan Wiggins

*Founder of International Wildlife Bond (IWB) Registered Charity No. 1164833*

E: [stephenawiggins@iwbond.org](mailto:stephenawiggins@iwbond.org)

Web: <https://iwbond.org/>



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**Submission to the DALRRD - ‘Meat Safety Act, 2000 (Act No. 40 of 2000) – Proposed Update to Schedule 1, Section 1(2)’**

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## 1 Introduction

Notice 201 lists some 98 species for inclusion in the Meat Safety Act, 2000 (Act No. 40 of 2000), it would be a herculean task to consider and analyse all of these species. Therefore, this submission concentrates on four main wildlife species named within Notice 201 – namely rhinoceros, hippopotamus, giraffe and elephant. However, the same principles given in this submission apply to all species listed at Notice 201 and the *"proposed update to Schedule 1, as provided in section 1(2) of the Meat safety act, 2000 (Act No. 40 of 2000), listing animals to which the Act applies."*

Any trade in wildlife must be viewed in the light of the coronavirus (COVID-19) pandemic. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) causes the infectious disease COVID-19, a zoonotic disease this is highly likely to have resulted from the human species' interaction with wildlife, wildlife habitat destruction and the utilisation of wildlife and derivative products.

The EMS Foundation (via Cullinan & Associates attorneys) sent a letter to The Honourable Ms Thoko Didiza, Minister for Agriculture, Land Reform and Rural Development on the 15 April 2020 that clearly outlines the concerns raised:

*["Wildlife Trade and Coronavirus,"](#)* EMS Foundation, via Cullinan & Associates attorneys, 15 April 2020

This concerns regarding wildlife utilisation includes consumption of wildlife within the human food-chain, not only as a food source, but also for inclusion within Traditional Medicine (TM).

So, in the light of the COVID-19 pandemic, the key questions are:

- Which elements (if any) of any legal, or proposed wildlife trade for human consumption is acceptable in terms of human health risks;
- Does any proposed legal wildlife trading help to mitigate and deter illegal activities such as wildlife poaching and illegal trafficking, or does legal trade legitimise and stimulate demand, giving oxygen to illicit trafficking routes and thus exacerbate illegal activities? Are there potential detrimental impacts for species conservation and biodiversity?



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- Is animal welfare being considered as an overruling priority in any captive-breeding environment, slaughter facility etc. that any meat trade encourages for the Notice 201 species?
- Consequentialism versus Deontology – Does the *"Consequentialism"* end result of legal trade and utilisation of wildlife justify the means (industrial breeding of wildlife, animal welfare issues/abuse, killing attrition and wildlife *"utilisation,"* human health risk etc.). Or should the *"Deontological"* ethical and moral arguments take precedence?

## 1.1 A Risk Based Approach

An open letter (["Open Letter to the World Health Organisation \(WHO\),"](#) 7 April 2020) signed by over 240 Non-Government Organisations calls for the WHO to:

*"Recommend to governments that they address the potential risks to human health from the trade in wildlife – including collection from the wild, ranching, farming, transport, and trade through physical or online markets for any purpose – and act to close down or limit such trade in order to mitigate those risks."*

A complete risk review and human health risk assessment of the wildlife trade (and any proposed new trade) that such practices present, in light of the ongoing zoonotic pandemic (COVID-19) with regard to human health implications does not seem an irrational response.

The world needs to reconsider its sustainable utilisation/exploitation of wildlife:

*"Hunting, farming and the global move of people to cities has led to massive declines in biodiversity and increased the risk of dangerous viruses like Covid-19 spilling over from animals to humans, a major [study](#) has concluded" - "[Human impact on wildlife to blame for spread of viruses, says study](#)," The Guardian, 8 April 2020*

The recommended 'risk assessment' and evidenced based approach includes the handling of species that are captive bred/farmed for meat and or other purposes. At the moment, the science surrounding COVID-19 (and many other zoonotic diseases) is unclear but potentially has implications for many species. Susceptible species might become reservoirs for COVID-19 or subsequent COVID-19 mutations. Where there is the risk of interaction between humans



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and animals, there is potentially a human health hazard, not to mention the risk associated with consumption of potentially infected animal/wildlife species.

For example, there are clear COVID-19 indicators for the handling, slaughter and processing captive bred lions, where captive bred lions are farmed for hunting and/or to supply the lion bone trade (for subsequent human consumption). Felines and felids, are seemingly susceptible to COVID-19 transmission from humans, therefore potentially acting as a reservoir for transmission of COVID-19 back to humans:

- [\*“Bronx zoo tiger tests positive for coronavirus,”\*](#) The Guardian, 6 April 2020;
- [\*“More tigers and lions test positive for coronavirus at US zoo,”\*](#) Sky News, 23 April 2020;
- *“Exploitation of wildlife through hunting and trade facilitates close contact between wildlife and humans, and our findings provide further evidence that exploitation, as well as anthropogenic activities that have caused losses in wildlife habitat quality, have increased opportunities for animal–human interactions and facilitated zoonotic disease transmission”* – Johnson et al., 8 April 2020 - [\*“Global Shifts in mammalian population trends reveal key predictors of virus spillover risk,”\*](#) The Royal Society Publishing;
- *“A [study](#) published on-line 8 April in Science, for example, reported the virus [COVID-19] can infect cats. Autopsies showed the infection led to “massive” lesions in their nasal passages, trachea, and lungs”* – Science, [\*“From mice to monkeys, animals studied for coronavirus answers,”\*](#) 17 April 2020, Vol. 368 Issue 6488, p 221 -222;
- Shi et al. 8 April 2020 - [\*“Susceptibility of ferrets, cats, dogs, and other domesticated animals to SARS–coronavirus 2,”\*](#) Science, DOI: 10.1126/science.abb7015.

The science needed for all species is still to be conclusively established, which would suggest a precautionary risk approach is advisable to [\*“address the potential \[COVID-19\] risks to human health from the trade in wildlife.”\*](#)

The wildlife trade in all its forms has always been a human health issue – but this can no longer be dismissed as a myth perpetuated by animal rightist. This can no longer be dismissed as an animal right issue, but is clearly a global health crisis/issue, with no single country, or party to blame.



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But without an urgent, comprehensive risk-based review of current and proposed wildlife trading practices, then the opportunity for a global response to the clear link of the potential impact of the wildlife trade, wildlife utilisation/exploitation, zoonotic diseases and human health will be lost.



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## 2 Applicable Acts and Guidance

- [Meat safety Act, 2000 \(Act 40 of 2000\)](#) [which replaced the Abattoir Hygiene Act (Act 121 of 1992)] - Any "meat" or "animal product" ("Definitions," 1. (1)) is therefore subject to the [Animal Disease Act 35 of 1984](#) whereby "Essential national standards," para 11., (k) must apply - "an animal presented for slaughter in accordance with an animal health scheme in terms of the Animal Diseases Act, 1984 (Act No. 35 of 1984), may only be accepted for slaughter if the animal is identified in accordance with the requirements of the scheme in question";
- [Animal Disease Act 35 of 1984](#) and "[Controllable and Notifiable Animal Disease](#)" by the Department: Agriculture, Food and Fisheries (DAFF), where it is stated that:

*"Certain diseases require government control as they affect individual animal owners and also pose serious risks to other farmers or consumers of animal products."*
- [Animal Health Act 2002 \(No. 7 of 2002\)](#)
- [Animal Protection Act \(No. 71 of 1962\)](#)
- [Abattoir Hygiene Manual](#), January 2007
- [Foodstuffs, Cosmetics and Disinfectants Act, 1972 \(Act 52 of 1972\)](#)
- [National Environmental Management Biodiversity Act, 2004 \(Act No. 10 of 2004\)](#) (NEMBA)
- [National Environmental Management Laws Amendment Bill](#) (NEMLAB)
- [National Environmental Management: Biodiversity Act, 2004 \(ACT No. 10 of 2004\)](#)  
[Draft The National Biodiversity Framework](#)
- [Threatened or Protected Species Regulations](#), 2007 (TOPS) as amended 2013

However, it remains unclear if the TOPS Regulations, 2007 are to be replaced in entirety by the "Regulations Pertaining to Threatened or Protected Terrestrial Species and Freshwater Species" ("the 2019 draft regulations") which, according to a letter



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signed by Ms Barbara Creecy, The Minister for Environment, Forestry and dated 18 November 2019, are intended to replace the TOPS Regulations, 2007. However, no public consultation has taken place in over 5 years on TOPS Regulations, contrary to NEMBA stipulations – "[Proposed Publication of Amended Threatened or Protected Species Regulations and Lists](#)," EMS Foundation, 16 March [2020]

- [Animal Improvement Act \(AIA,\) 1998](#) and "[Additional Lists to Table 7](#)," 17 May 2019

## 2.1 Animal Improvement Act (AIA)

In 2019, South Africa's game breeding industry obtained (without any public consultation) the [listing](#) of 32 species including white and black rhinoceros, lion, cheetah, giraffe ([IWB 2019d](#)) (plus 24 specific indigenous and six non-indigenous game species, amongst others, lechwe 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 permits "*animal breeders' societies*" (ie. the membership of "*breeders' societies*" remains wide open – reference "[Definitions](#)") to manipulate breeding outcomes and hence seek to breed genetically distinct sub-species. This is the same method used by humans to domesticate aurochs into docile cows, the grey wolf into the many breeds of dogs and produce "*golden*" impala:

*["By the stroke of a legislative pen, a list of iconic and in some cases endangered wild animals can now be manipulated as farming stock. What happens next is anyone's guess,"](#)* Don Pinnock, The Daily Maverick, 16 October 2019

Thereby the AIA allows 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.

The [species added](#) to the AIA Table 7 was at the behest of Minister Senzeni Zokwana (Department of Agriculture, Forestry and Fisheries (DAFF)) as notified in [Gazette 42464, 17 May 2019, Amendment to AIA, Table 7](#). However, no public consultation took place before the [listed species](#) were added to the AIA, in clear contravention of the [AIA](#), Paragraph 2(2):



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*“In the **case of a new kind of animal** or a new breed of such kind of animal to be imported into or to be bred in the Republic, the Minister shall make such declaration after considering the request, taking the international law into consideration and after considering comments received in response to an invitation by the registrar to **interested persons** to comment on a proposed declaration that had been published in the Gazette at least 30 days prior to such declaration”*

Since when has the public, or NGOs not been deemed “*interested persons*?” As a past precedent, “*Game Policy*” was put to public consultation in [Notice 874, Vol. 493 Gazette 28994, 7 July 2006](#). So why was adding new kinds of animals/breeds to the AIA Table 7 not put to public consultation? There is clearly scope for challenge to be made for the lack of public consultation for the DAFF’s AIA amendments made in May 2019.

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

As an example of the potential consequences, it would seem that the game farming industry is moving towards increased genetic modification of black and white rhinoceros etc. Under such a regime, there is the consideration that captive bred rhinoceros (without bio-security separation of genetically modified and not modified) could no longer be considered for release into the wild, regardless of any claims that captive bred rhinoceros have not been “*imprinted*” (incapable of survival in the wild). However, any genetic pollution of captive bred rhinoceros could completely undermine any claim that the Private Rhino Owners’ Association ([PROA](#)) has to any conservation imperative in their members’ rhino breeding endeavours. Or perhaps the intention is to create a genetic sub-breed of white rhinoceros for example in an attempt to subvert CITES restrictions (a distinct captive-bred origin of rhinoceros) – any reasoning for inclusion of rhinoceros (and many other species) within the AIA remains opaque and withheld from democratic, public scrutiny it would seem.

The risks of genetic pollution is clearly identified as a major threat within South Africa’s own National Biodiversity Strategy and Action Plan as a research priority:

*“Research priorities that emerged through the process of developing the revised NBSAP include research on/into....The impact of current and future threatening processes on biodiversity, and mechanisms for adaptation, management and mitigation for example research to address genetic pollution (e.g. colour variance) linked to requirements of the hunting industry and research on risk assessments and*



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*how they are conducted” – “[2nd National Biodiversity Strategy and Action Plan 2015 – 2025](#),” Republic of South Africa, Department: Environmental Affairs*

Can the DAFF explain and make public the research that substantiates the risks inherent in listing black and white rhinoceros, lion, cheetah, giraffe etc. within the AIA – and how human consumption of proposed meats derived from any genetically manipulated animal/wildlife will comply with the Meat Safety Act (Act No. 40 of 2000) and ensure such meat production does not become *“unsafe for human and animal consumption.”*



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### 3 Evidenced Based Risk Assessment

Is there any publicly available science (from the South African National Biodiversity Institute (SANBI) or otherwise) that assesses:

- The risk to the wild species' conservation status, not just within South Africa, but globally, from any proposed trade expansion into 'meats'?
- What demand side risk assessment has been completed for potential domestic, and/or any 'legal' international export of each proposed genus/species (as given within Notice 201 of 2020) 'meats,' or derivative products that encompass the given 'meats'? This is particularly applicable to all Convention for International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species.
- What risk assessment has been completed for the potential for zoonotic or otherwise disease transmission to humans during any subsequent species handling, breeding, slaughter, processing, packaging, and indeed consumption of the meats proposed under Notice 201?

In the absence of any evidence based science in support of extending rhinoceros, or elephant etc. utilisation and the potential expansion of intensive captive breeding activities that could no doubt ensue as a result, then such commercial business endeavours to promote these species' meat for human consumption, then a precautionary risk approach is recommend – that until such independently sourced, peer reviewed science is available, then the meat of any species lacking that specific evidenced/scientific backing should not be added to Schedule 1, as provided in section 1(2) of the Meat safety act, 2000 (Act No. 40 of 2000).

#### 3.1 Pseudo Hunting Risk

There is also the risk that pseudo hunting could be exploited to 'legally' obtain target species meat – where pseudo hunting is an acknowledged abuse of the leeway given to trophy hunting as a means to circumvent CITES regulations.

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,



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such as lions for their skeletons to supply the lion bone trade, or indeed meat) 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), 18<sup>th</sup> Conference of the Parties ([CoP18](#)) states *“constitute the greatest threat to this species.”*

*“A 2012 report highlighted multiple [CITES Permit] abuses related to trophy-hunted rhinos exported from South Africa to Vietnam, including allegations that corrupt professional hunters allowed individuals not named on the hunting permit to shoot rhinos or falsely obtained export permits for clients not named on the permit. Instances of this “pseudo hunting,” where the horn was in fact exported with the intention of selling it commercially, were documented. On the import side, rhino horn were only declared in the event of a Customs inspection; if no inspection was conducted then the unsurrendered CITES documents were subsequently re-used until they expired. The*



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*authors calculated that 74% of South Africa’s total rhino horn exports to Vietnam went undeclared at the time of importation ([Milliken and Shaw 2012](#))” - [UNODC 2012](#)*

It takes the hunting industry (under outside pressure) a long time to recognise and attempt to address such pseudo-hunting abuses 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, giraffe, hippopotamus etc. cannot continue to be abused to obtain wildlife commodities, such as meat for commercial gain, where such commercial gain is prohibited by CITES without approval for Appendix I and Appendix II listed species, unless under exceptional circumstances such trade is permitted:

*“Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances”*

*“Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival”*



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## 4 Rhinoceros

It is assumed that the privately owned captive bred rhinoceros within South Africa are proposed as the main source for inclusion of rhinoceros' meat within Schedule 1 of the Meat Safety Act, 2000 (Act No. 40 of 2000).

These privately held rhinoceros within South Africa are predominantly southern white rhinoceros (*Ceratotherium simum simum*). So the inclusion of other complete genus within Notice 201 – Dicerorhinus, Ceratotherium, Dicerorhinus, Rhinoceros – remains something of a mystery, unless the plan is to increase the scope and inclusion of other rhinoceros genus into intensive breeding facilities within South Africa for meat production, or the intention is to set a precedent for other countries to follow suit and therefore perhaps theoretically raise the prospect of support for a submission to CITES for regulatory approval for international exports of South African rhinoceros meat?

### 4.1 White rhinoceros (*Ceratotherium simum*)

The [IUCN Red List](#) categorises the white rhinoceros (*Ceratotherium simum*) as "Near Threatened."

The Southern white rhinoceros (*Ceratotherium simum simum*) 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."

There are about 20,000 white rhinoceros, the vast majority (93%) in South Africa, with an additional 6,000+ ([Mass et al., 2016](#)) held privately in captivity, with rhino breeders speculating upon the reinstatement of international trade (banned by CITES since 1977) in rhinoceros' horn.

The [Convention first applied to \*Ceratotherium simum\* on 1 July 1975](#) with the species listed at Appendix I. However, on 16 February 1995, South Africa's white rhinoceros' population (wild or captive) received exemption to an Appendix II listing, with the caveat that the exemption was:



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*"For the exclusive purpose of allowing international trade in live animals to appropriate and acceptable destinations and hunting trophies. All other specimens shall be deemed to be specimens of Appendix I and the trade in them shall be regulated accordingly" where "Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances."*

CITES [Article VII, Paragraph 4](#): states that:

*"Specimens of an animal species included in Appendix I bred in captivity for **commercial purposes**, or of a plant species included in Appendix I artificially propagated for commercial purposes, shall be deemed to be specimens of species included in Appendix II."*

Therefore, it is disputed that the assertion previously made at [Notice 1105 \(Gazette 42660, Vol. 650, 22 August 2019\)](#) that *"specimens bred in captivity for commercial purposes are deemed to be specimens of species included in Appendix II (Article VII) of CITES **and therefore may be traded**"* can somehow overturn the caveat set against such trade in the 1995 exemption of South Africa's white rhinoceros populations, which to be clear only allows *"international trade in live animals to appropriate and acceptable destinations and hunting trophies"* – clearly excluding international trade by somehow dropping captive bred species from Appendix I to Appendix II control in *Ceratotherium simum simum* derived horn, or *Ceratotherium simum simum* derived meat, or any other such derivative *"animal product"* from this genus of rhinoceros.

In addition, it was made clear during the [Notice 1105 consultation](#) that pretending that any proposed trade is only being orchestrated *"for primarily non-commercial purposes"* is a deceit (it is duly noted that this was not a definitive *"non-commercial,"* but only *"primarily non-commercial"* which would suggest leeway to accommodate some element of *"commercial purpose"* within the trade envisaged by [Notice 1105](#)).

Any proposed rhinoceros meat trade for potential international exportation from South Africa under consideration within Notice 201 is either being proposed to facilitate trade for non-commercial, or commercial purpose. It can't be both, or it can't be commercial trade poorly disguised as *"primarily non-commercial:"*



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*"The term 'commercial purposes' should be defined by the country of import as broadly as possible so that any transaction which is not wholly 'non-commercial' will be regarded as 'commercial'" - [CITES Resolution Conf. 5.10 \(Rev. CoP15\)](#)*

So the proposed listing of *Ceratotherium simum*, and/or *Ceratotherium simum simum* Schedule 1, as provided in section 1(2) of the Meat safety act, 2000 (Act No. 40 of 2000) could at this time only be theoretically self-approved (based on the caveats given with regard to evidenced based risk assessment supporting such trade, as given at Paragraph 3, "*Evidenced Based Risk Assessment*") for domestic market purposes within South Africa.

The export of rhinoceros meat from South Africa sourced from *Ceratotherium simum*, and/or *Ceratotherium simum simum* would be in contravention of [CITES Appendix I restrictions](#) - there are no current CITES regulations in place that would allow the legal export of *Ceratotherium simum*, and/or *Ceratotherium simum simum* meat for commercial purposes.

If the plan is to take the meat from trophy hunted white rhinoceros, then the meat would need to remain fit for human consumption, despite the meat donor animal in question being slaughtered in an unlicensed, open air 'abattoir' as a trophy - unless the intention is to usher any given white rhinoceros meat donor animal into an enclosure to be slaughtered, but of course this would then not be a legal, fair chase trophy hunt.

#### 4.2 Black rhinoceros (*Diceros bicornis*)

The Black rhinoceros (*Diceros bicornis*) is listed as "*Critically Endangered*" on the [IUCN Red List](#), population increasing and is a ([Species+](#)) CITES Appendix I listed, but with a trophy hunting quotas set for Namibia and South Africa.

*"Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances" - CITES*

South Africa moved from 5 black rhinos a year to "*harvest*" up to 0.5% of South Africa's black rhino population ([CoP18](#)) – or around nine black rhino per year at today's species' population level. There are perhaps a total of 5,000 Black rhinoceros in left in the wild across the whole African continent.

Therefore, because of its listing, sourcing of wild *Diceros bicornis* meat would be limited to obtaining the meat from a maximum of 0.5% of South Africa's wild black rhino population



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when slaughtered as a hunting trophy. Again, the meat would need to remain fit for human consumption, despite the meat donor animal in question being slaughtered in an unlicensed, open air 'abattoir' - unless the intention is to usher any given wild *Diceros bicornis* meat donor animal into an enclosure to be slaughtered, but of course this would then not be a legal, fair chase trophy hunt.

### 4.3 Rhinoceros Diseases

Just to list some common illnesses, haemolytic anaemia (the accelerated destruction of red blood cells and breakdown of haemoglobin, resulting in fatigue and shortness of breath with the potential of developing into heart failure), mucocutaneous ulcerative syndrome (ulcers that develop in the mouth and nose and on the skin of the animal) and fungal pneumonia (a fungal infection of the lungs that causes impaired breathing, fever, and shivers).

Tapeworms are often found in the gut of rhinos. These flatworms are usually ingested as larva, which hatches and grows in the intestine of the animal. If left untreated, a tapeworm can live inside the gut for approximately 20 years and can grow to 50 metres in length.

Salmonella Spp are bacteria, some of which may be pathogenic and known causes of disease. This disease is commonly associated with outbreaks of disease in various domesticated species but also rhinoceros:

*"A survey was mailed to 72 institutions in the USA requesting information on Salmonella spp. cultures in black rhinoceroses (Diceros bicornis), white rhinoceroses (Ceratotherium simum), and Indian rhinoceroses (Rhinoceros unicornis). Sixty-one institutions responded (85% return rate), with seven reporting positive cultures (11% prevalence rate; 10% if survey nonresponders had negative cultures). There were 17 positive cultures from 16 different animals, with nine different serotypes of Salmonella and 2 additional cultures identified to the group level"* – [Kenny 1999](#)

Streptococcus equisimilis also occurs in rhinoceros' populations and is also reported in horses, cattle, sheep, pigs and humans in which it normally occurs in the upper respiratory tract.



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## 5 Elephant

It is unclear why the Asian elephant genus, *Elephas* has been included unless the intention is to include this genus within intensive breeding facilities within South Africa for meat production.

The wild African elephant (*Loxodonta Africana*) population is perhaps less than 400,000 ([Chase et al. 2016](#)) across the entire continent, with perhaps 17,000 in South Africa. The continent wide 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 [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).

Therefore, any proposed legal 'sustainable utilisation' trade mechanism for elephant meat derived within South Africa where elephant populations are in Appendix II (subject to annotation) is limited to some 150 elephants killed for hunting trophies.

*"Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival"*  
- CITES

Therefore, unless CITES approves a controlled international trade, the elephant meat derived from trophy hunting would be subject to domestic demand only.



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Of course, the meat would need to remain fit for human consumption, despite the meat donor animal in question being slaughtered in an unlicensed, open air 'abattoir.'

Any desire to increase the volume of elephants killed for meat (beyond trophy hunting/pseudo hunting quota attrition) would require CITES approval.

However, the fear is that a legal trade in elephant meat could encourage the 'sustainable utilisation' captive breeding of elephants (with no conservation imperative, and against [Elephant Norms and Standards](#)) and potentially invites increased poaching of elephants to illicitly infiltrate and supply any legal trade routes.

## 5.1 Elephant Diseases

Elephant pox (*Orthopoxvirus bovis*) is one of the most dangerous diseases for elephants, it is lethal, and was until vaccination programmes, responsible for the death of many elephants.

Elephant pox is potentially a strain of cow pox, and is one of the most dangerous diseases for elephants. Most often, it is spread to the elephants from rodents. It is lethal, and was until vaccination programmes, responsible for the death of many elephants. (Kuntze and Janetzky, 1982). Even when treated, an infection leads to enormous suffering for the elephants. Humans can be infected with cow pox via transmission from elephants ([Hemmer et al. 2010](#)).

Ungulates and elephants are susceptible to foot and mouth disease, plus Elephant endotheliotropic herpes virus (EEHV), Elephant Encephalomyocarditis virus (EMC), rabies, Anthrax, Salmonellosis, TB - Mycobacterium tuberculosis complex/M. bovis/M africanum/M microti, Tetanus, Enterotoxemia (Clostridium, dangerous in immune-compromised individuals), E. coli and Pasteurellosis, Colic, Arthritis (Septic arthritis, Reactive arthritis, Rheumatoid arthritis, Psoriatic arthritis, Felty's syndrome, Juvenile idiopathic arthritis, Still's disease) - crystal (Gout, Chondrocalcinosis) - Osteoarthritis (Heberden's node, Bouchard's nodes), Pneumonia.



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## 6 Giraffe

Giraffe (*Giraffa Camelopardalis*) 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 United States of America (USA)).

The [IUCN Red List](#) classifies the giraffe as "Vulnerable," with the species' population in decline at some 68,000 remaining globally. The Southern African population (Zimbabwe, Mozambique, South Africa, Botswana) is estimated ([IUCN Red List, 2016](#)) as 21,387 in total.

The four main [threats](#) listed by the IUCN being habitat loss, civil unrest, poaching and ecological changes, but also lists "Livestock farming & ranching" and "Hunting & trapping terrestrial animals" as threats.

At the 2019, CITES Conference of the Parties (CoP18), Proposal 5 was [accepted at Committee, 22 August 2019](#). This proposal up-listed "[Giraffa camelopardalis \[Giraffe\] to Appendix II of the Convention](#)," thus enhancing (in theory) the species' protection from the threats of both legal and illegal offtake for meat, trophy hunting, or for parts and products.

*"Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival"*  
- CITES

Wild-sourced giraffe specimens accounted for 99.7% of specimens imported to the USA from 2006-2015 (39,397 of 39,516), about 95% of individual giraffes imported to the USA from 2006 to 2015 were for hunting trophy purposes. The top exporter of giraffe specimens for hunting trophy purposes was South Africa (3,065 or 60.8%). The top country exporting wild giraffes and their parts to the USA was South Africa (31,245 specimens representing at least 2,207 giraffes) – [Giraffa camelopardalis \[Giraffe\] to Appendix II of the Convention](#)

It seems to defy logic, that the threat to the giraffe species' conservation and demand for its meat (as 'bushmeat'), as listed [by CITES](#), is seemingly being contradicted by the South African proposal at Notice 201. By developing and potentially stimulating demand for 'legal' giraffe meat, how can this proposal not be seen as detrimental to the species' conservation and encouraging and legitimising the poaching of giraffe to meet demand for illegal giraffe bushmeat:



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*“At the national level, poaching for bushmeat is identified as one of the factors contributing to the recent decline of giraffe populations”*

*“As part of the bushmeat trade, giraffes are snared or otherwise illegally hunted for their meat, bones, hides, and other parts (Fennessy & Marais, 2018; Wube et al., 2018; Fennessy, Marais, & Tutchings, 2018; Muneza et al., 2018; Fennessy et al., 2018). Giraffes are most frequently caught in head/neck snares (Strauss et al., 2015), but occasionally leg snares are also used. While giraffes can break free from snares, many die once snared (Strauss et al., 2015). Adult giraffes are most frequently targeted and males are most frequently snared (Strauss et al., 2015; Suraud et al., 2012). The level of illegal giraffe poaching is difficult to detect because carcasses may not remain in the bush due to the high demand for giraffe bones and hides (Strauss et al., 2015). Giraffe meat is consumed locally but is also part of cross border trade in bushmeat (Okello et al., 2015) and much larger markets may exist for giraffe parts than are currently documented (Strauss et al., 2015), and giraffe accounted for 12% of the illegal bushmeat production among the top 20% of hunters who reported in Botswana’s Okavango Delta (Rogan et al., 2017). Poaching of Masai giraffes (*G. c. tippelskirchi*) is common in protected areas in Tanzania (Kiffner et al., 2015), and poaching may have caused certain populations in the country to be designated as population sinks (Lee & Bolger, 2017)” - [Giraffa camelopardalis \[Giraffe\] to Appendix II of the Convention](#)*

There is an implied assumption in the Notice 201 proposal that a ‘legal’ trade in giraffe meat could compete with and deter illegal bushmeat attrition of giraffe. This is a fallacy – see Conclusions at Paragraph 9.2, *“Does Legal Trade Counter Illicit Activity?”*

Any legal demand for giraffe meat via some notion of a ‘Sustainable Utilisation’ policy potentially encourages and legitimises poachers also seeking to profit. Have these continent-wide risks to the giraffe species been assessed in any peer-reviewed proposed development of a stand-alone trade in giraffe meat?

There have not been any trophy hunting quotas set ([Species+](#)) for the now listed Appendix II giraffe species. So how will South Africa set a ‘sustainable’ quota of giraffe attrition for the propose trade in giraffe meat and gain approval from CITES for any commercial sales of an Appendix II listed species?

Is the plan to develop specific commercial captive breeding facilities? Note: *“Para 8.4 - Captive breeding and artificial propagation, Giraffes have been bred in zoos, but there is no*



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*evidence of commercial breeding operations” – [“Giraffa camelopardalis \[Giraffe\] to Appendix II of the Convention”](#)*

## 6.1 Giraffe Diseases

Rinderpest was caused by a paramyxovirus (genus Morbillivirus) closely related to those that cause measles in humans and viral distemper in dogs. Besides cattle, it also seriously affected water buffalo, giraffes, some types of antelopes and wild pigs, and other cloven-hoofed ruminants.



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## 7 Hippopotamus - Common hippopotamus (*Hippopotamus amphibius*)

The hippopotamus species (*Hippopotamus amphibius*) is CITES ([Species+](#)) categorised at Appendix II and classed by the [IUCN Red List](#) as “Vulnerable,” with a “Stable” estimated global population of around 115,000 – 130,000.

*“Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival”*  
- CITES

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 ([Anderson et al. 2017](#)).

Therefore, it is suspected that any proposed trade in hippopotamus meat will no doubt encourage a by-product side-line in hippo canine teeth as a source of ivory profiteering.

CITES set the following 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.

South Africa is not listed. So CITES would need to approve a quota for South Africa’s planned hippopotamus attrition for trophies/meat. However, it is assumed that as a by-product side-line to any hippopotamus meat trade, South Africa will either seek to stockpile hippo canine teeth, or also seek a CITES quota for hippopotamus canine ivory.

The risk is that such ivory could be illicitly traded, and/or a legal trade route could further stimulate demand and thus threaten the species’ survival from increased poaching pressure. Of course, any illicit hippo ivory obtained within the wider region, not just South Africa, could also be trafficked along with any legal trade.

In a 2017 study, *“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



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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 - [Anderson et al. 2017](#)

[Lewison 2007](#) evaluated a model population of the hippopotamus 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 for meat and 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](#)).

## 7.1 Hippopotamus Diseases

Hippos are susceptible to a wide variety of bacterial and viral diseases and parasites, including roundworms, blood and liver flukes, ticks, anthrax, brucellosis, Rift Valley Fever, tetanus, trypanosomiasis, schistosomiasis, salmonellosis and trichinosis.

Humans can become infected with anthrax by handling products from an infected animal, or by breathing in anthrax spores from infected animal products.



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## 8 Animal Welfare

One only has to look at the Department: Environmental Affairs' (DEA') failure to even consider animal welfare in the setting of the 'lion bone trade' quota to see that animal welfare is not a priority when it comes to 'sustainable utilisation' within South Africa. The Notice 201 proposed inclusion of meat from certain wildlife species could potentially encourage the intensive captive breeding of those species under some notion of a 'sustainable utilisation' umbrella.

The National Society for the Prevention of Cruelty to Animals ([NSPCA](#)) case commenced in September 2018 ([Case No. 86515/17](#)) against the Minister of DEA and co Respondents. The case resulted in a [Judgement \(6 August 2019\)](#) from the Pretoria High Court, which concluded that the lion bone quotas set for 2017/18 were unlawful because animal welfare had not been considered (by the DEA Minister) to be a function in the Minister's decision making. This has been proven a fallacy in contravention of the Constitution. The case highlighted that:

- The DEA considers the responsibility for the administration of the Animals Protection Act No 71 of 1962 falls within the legislative mandate of the Department of Agriculture, Forestry and Fisheries (DAFF). However, the legal understanding is that even if the mandate does not reside with the decision maker (the DEA), this does not preclude the decision maker (DEA) from considering them if indeed they are relevant – where animal welfare is indeed a consideration enshrined in the Animal Protection Act No. 71 of 1962.

Any proposed expansion in the trade of meat derived from the captive bred specimens of the target species does not engender trust, based on the experience from the captive lion breeding abuses detailed within the [case](#) given above, that safeguards are in place within South Africa to ensure animal welfare is at the forefront of the DAFF's/DEFF's/DEA's systems/thinking, or that any self-declared custodian of captive animal welfare can be trusted.

The lack of adequate regulation of animal welfare within privately owned, captive breeding facilities is clearly illustrated by the fact that the self-declared, independent custodians of lion breeding welfare, the South African Predator Association (SAPA) own council member, Jan Steinman is being prosecuted for animal cruelty:



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*"Although SAPA [[South African Predator Association](#) - the Third Respondent in the above case] 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*

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 full on-going compliance.

How does this poor standard of oversight instil any confidence that the DEFF, or DAFF would be any better at overseeing captive bred rhino, giraffe, hippopotamus, or elephant etc. breeding facilities that exist, or will be encouraged to manifest as a result of Notice 201 and the proposals to develop demand for their meat?



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## 9 Conclusions

### 9.1 Secure Ecologically Sustainable Development and Use of Natural Resources

South Africa's Constitutional rights on the issue of 'sustainable' wildlife utilisation are enshrined at Section 24, *"Chapter 2, Bill of Rights, Environment."*

This section refers to ensuring everyone's right *"to an environment that is not harmful to their health or wellbeing;" "to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that"* amongst other criteria *"promote conservation,"* whilst ensuring *"secure ecologically sustainable development and use of natural resources..."*

Without peer-reviewed science to back the extended utilisation of elephant, rhinoceros, hippopotamus, giraffe et al. as proposed within Notice 201 for meat, then developing trade has no evidential base. In the absence of supporting evidence, therefore the Notice 201 proposals remain unproven as non-detrimental to the survival of the specific species listed for inclusion under Schedule 1 of the Meat Safety Act, 2000 (Act No. 40 of 2000).

Without substantiated science, the utilisation of species with CITES Appendix listing cannot logically be considered a *"reasonable legislative"* measure that *"promotes conservation"* when there is no independent scientific evidence that the proposal utilisation provides any conservation value, or indeed such trade does not directly threaten conservation and *"secure ecologically sustainable development and use of natural resources..."*

I doubt the vast majority of *"future generations"* will view the negative impacts of past wildlife 'sustainable utilisation' ideology as a favourable historic legacy and inheritance.

The National Environmental Management Biodiversity Act, 2004 ([NEMBA](#)), [as amended by Act No. 14 of 2013](#) and the National Environmental Management Laws Amendment Bill ([NEMLAB](#)) (as adopted by the Portfolio Committee on Environmental Affairs on 19 June 2018):

*"the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resource"* – ACT Summary;

*"the use of indigenous biological resources in a manner that is ecologically sustainable, including taking into account the well-being of any faunal biological resource" - "Objectives of the Act," 2. (a)(ii), where well-being is defined as; "well-being' means*



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*a state where the living conditions of a faunal biological resource are conducive to its health"*

*"must collect, generate, process, coordinate and disseminate information about biodiversity and the sustainable use of indigenous biological resources, and establish and maintain databases in this regard" – "Functions," 11.(1)(j)*

*"may undertake and promote research on indigenous biodiversity and the sustainable use of indigenous biological resource" – "Functions," 11.(1)(l)*

*"... the use of indigenous biological resources in a [sustainable] manner that is ecologically sustainable, including taking into account the well-being of any faunal biological resource involved.." Section 2, 42.(ii)*

*"The Minister must promote research done by the Institute and other institutions on biodiversity conservation, including the sustainable use, protection and conservation of indigenous biological resource" – "Research," 50.(1)*

*"vulnerable species, being any indigenous species facing an extremely high risk of extinction in the wild in the medium-term future, although they are not a critically endangered species or an endangered species" - "Listing of species that are threatened or in need of national protection," 56.(c)*

*"protected species, being any species which are of such high conservation value or national importance that they require national protection, although they are not listed in terms of paragraph (a), (b) or (c)" - "Listing of species that are threatened or in need of national protection," 56.(d)*

*"ecologically sustainable utilization of biodiversity" - Chapter 8, "Regulations by Minister," 97.(1)(b)(viii)*

The [critically endangered, endangered, vulnerable and protected species \(February 2007\)](#) as [amended](#) lists:

White rhinoceros and African elephant as *"protected species"*; Black rhinoceros as a *"endangered species."* The hippopotamus or giraffe are not listed, but of course both species are CITES Appendix II listed regardless.

Neither the NEMBA or the [Threatened or Protected Species Regulations](#) (TOPS) (as amended 2013) has a provision for *"meat"* for any species listed within the categories of *"critically endangered," "endangered," "vulnerable"* or *"protected"* species.



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*"Trade in listed threatened and protected species" (NEMBA, Paragraph 59.(b), "Functions of Minister") makes clear that The Minister "must consult the scientific authority on issues relating to trade in specimens of endangered species regulated by such an international agreement" – with that international agreement being South Africa's agreement to abide by CITES regulations. Therefore, the SANBI should be providing 'scientific' evidence for public scrutiny if any legal domestic and/or international trade in meat derived from TOPS, such as rhinoceros and/or elephant is envisaged.*

## 9.2 Does Legal Trade Counter Illicit Activity?

There is an implied assumption in the Notice 201 proposal that a 'legal' trade in certain species' meat can somehow compete with and deter illegal bushmeat attrition of the same species. This is a fallacy - illicit activities have no business overheads (such as employees, regulatory compliance etc.). Poachers just need a gun and complicit parties to help traffick their product and share the profits.

One only has to look at the evidence in a comprehensive report on the 'legal' 'lion bone trade,' [\*"The Extinction Business, South Africa's 'Lion' Bone Trade"\*](#) (EMS Foundation and Ban Animal Trading, July 2018) where 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" - [\*"The Extinction Business, South Africa's 'Lion' Bone Trade,"\*](#) EMS Foundation and Ban Animal Trading, July 2018.*

What makes anyone think any form of legal trade in giraffe, or hippopotamus meat for example will be immune from fuelling an established and incumbent illicit bushmeat trade when the 'legal' 'lion bone trade' has been such a failure in terms of countering illicit activity?

According to the theory of pro-trade advocates:

*"...scarcity caused by trade bans, produces high prices which leads to higher poaching rates. Instead of combating illegal poaching, according to this argument, scarcity should be eliminated through legal supply from wildlife farmers and state stockpiles.*



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*Legalising markets would then reduce or even eliminate profitability for poachers while maintaining high returns for legal suppliers"- [Nadal et al., 2014](#)*

The pro-trade assumption being that markets which are currently dominated by illicit forces, somehow can be countered by legal trade and reach some kind of natural equilibrium.

These assumptions are not supported by economic professionals within academia - the academic conclusion is that 'legal' trade does not potentially counter and combat illicit activity – legal and illegal trade does not necessarily reach a natural equilibrium:

*The pro-trade argument "relies on highly unrealistic assumptions, one of which is that legal trade is able to fully substitute for illegal trade. This points to a failure to understand illegal markets. Market legalisation, they suggest, would actually increase demand as well as provide avenues for illegal traders to launder poached products.....Governments, economists and conservationists who think they can curb poaching by selling rhino horn and ivory legally have little understanding of macroeconomics or the sophistication of international crime syndicates"- Prof Nadal and Mr Aguayo, "[High-level report calls SA wildlife trade policy reckless](#)," Conservation Action Trust, Don Pinnock, 13 June 2013*

Prof Nadal's and Mr Aguayo's 2014 paper "[Leonardo's Sailors: A Review of the Economic Analysis of Wildlife Trade](#)" (2014) sought to "...evaluate the scope and limitations of the economic analysis of wildlife trade that has been carried out in the past three decades." This paper highlights the pro-trade arguments 'misguided' economic theory:

- *"The pro-market argument starts from the premise that poaching and illegal trade are a consequence of trade bans imposed by bodies like CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora)."*
- *"One of the most striking features in the economic analysis of wildlife trade is the level of misinformation concerning the evolution of market theory over the last six decades. To anyone who comes in contact with the corpus of literature on wildlife trade, and in particular the literature recommending the use of market-based policies, the uncritical use of theoretically discredited analytical instruments is a striking revelation. Perhaps the most important issue here is the conviction that markets behave as self-regulating mechanisms that smoothly lead to equilibrium allocations and therefore to economic*



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*efficiency. This belief is not sustained by any theoretical result, a fact that is well known in the discipline since at least the early seventies.”*

### 9.3 Buffer Theory

Does exploitation of a captive bred stock of a given species provide a buffer for the same given wild species' population from unnatural attrition?

[Williams, V.L. 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 \(SAPA\) 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.L. 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). 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 2018](#)). 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](#)*

Therefore, there is also an unproven 'buffer' of wild species provided by exploiting captive/wild species populations to supply and stimulate demand for meat as proposed within Notice 201 for rhinoceros, hippopotamus, giraffe and elephant.



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## 9.4 Precautionary Risk

Perhaps too many 'sustainable utilisation' practices are enacted without any pre-risk assessment of the potential negative ecological impacts or potential negative conservation consequences. Only when the inevitable ecological/negative conservation impacts arise post-trade implementation is there any consideration seemingly given to such issues. Even then, the negative impacts of such trade are seemingly ignored, wished away, or scapegoated as someone else's fault for pointing out the negative consequences.

Post-COVID-19, 'sustainable utilisation' of wildlife and the inherent risks in that trade for profit is only making the an *"environment protected, for the benefit of present and future generations"* a secondary consideration to profiteering, potentially risking human health, with the potential to de-stabilise global economic security.

Therefore, a [precautionary risk principle](#) approach is recommended – if the evidence/peer-reviewed science does not support trade, then the 'try it and see' approach must be abandoned.

## 9.5 Assessment Criteria Conclusions

In terms of the criteria set at Paragraph 1, *"Introduction"* the following conclusions are drawn:

- *"Which elements (if any) of any legal, or proposed wildlife trade for human consumption is acceptable in terms of human health risks."*

The proposed human, or animal consumption of rhino, giraffe, hippopotamus, or elephant meat lacks peer-reviewed science that demonstrates the risks are negligible for known and emerging zoonotic diseases transmission in the handling, slaughter, processing and consumption of the proposed meat derived from these species.

Letters has been sent on the issues of existing and/or any proposed wildlife trade and coronavirus:



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The Honourable Ms Thoko Didiza, Minister for Agriculture, Land Reform and Rural Development - [“Wildlife Trade and Coronavirus,”](#) EMS Foundation, via Cullinan & Associates attorneys, 15 April 2020

The Honourable Dr Zwelini Mkhize, Minister for Health - [“Wildlife Trade and Coronavirus,”](#) EMS Foundation, via Cullinan & Associates attorneys, 15 April 2020

- *“Does any proposed legal wildlife trading help to mitigate and deter illegal activities such as wildlife poaching and illegal trafficking, or does legal trade legitimise and stimulate demand, giving oxygen to illicit trafficking routes and thus exacerbate illegal activities? Are there potential detrimental impacts for species conservation and biodiversity?”*

No peer reviewed science has been presented to support rhino, giraffe, hippopotamus, or elephant meat trade as not detrimental to the survival of the wild species (within, or outside of South Africa). Past experience from the lion bone trade suggest legal wildlife derivative product trading stimulates illicit activity, creating parallel markets. There is no peer reviewed science to substantiate any claim that rhino, giraffe, hippopotamus, or elephant meat consumption could deter illegal activities such as poaching for bushmeat.

- *“Is animal welfare being considered as an overriding priority in any captive-breeding environment, slaughter facility etc. that any meat trade encourages for the Notice 201 species?”*

The captive breeding of lions (reference Paragraph 8, *“Animal Welfare”*) proves that South African authorities lack the co-ordination and clear designation of responsibility for animal welfare within its pursuit of sustainable utilisation ideology, though it has been proven that there is a [legal obligation](#) for animal welfare to be given consideration that it meets the required standards in any existing, or proposed animal/wildlife utilisation/trade endeavour.

The welfare, or ‘well-being’ of wildlife as a *“biological resource”* has clearly been absent in consideration of captive bred lions. The NEMBA clearly states that *“the use of indigenous biological resources [must be conducted] in a manner that is ecologically*



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*sustainable, including taking into account the **well-being** of any faunal biological resource” - “Objectives of the Act,” 2. (a)(ii)), where well-being is defined as; “**well-being’ means a state where the living conditions of a faunal biological resource are conducive to its health.**” Facilities conducive to ‘its’ health have been clearly absent not only in the DEA’s consideration of trade and/or within regulation, but of course is lacking in the self-proclaimed custodians for overseeing conducive practices by its members, namely the SAPA’s own failure to ensure compliance of [the SAPA’s own council member’s facility](#). The read across applies to any other captive breeding facility for other species that either already exist or are proposed.*

- *“Consequentialism versus Deontology – Does the “Consequentialism” end result of legal trade and utilisation of wildlife justify the means (industrial breeding of wildlife, animal welfare issues/abuse, killing attrition and wildlife “utilisation,” human health risk etc.). Or should the “Deontological” ethical and moral arguments take precedence?”*

The “consequentialism” results (a meat trade) for any proposed trade in rhino, giraffe, hippopotamus, or elephant meat remains opaque. There is no substantiated evidence, or peer reviewed science of any benefits of such trade, which is a pre-requisite in accordance within the Constitution “to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that” amongst other criteria “promote conservation,” whilst ensuring “secure ecologically sustainable development and use of natural resources...”

Therefore, in the absence of any clear beneficial “consequentialism” results, then “deontological” arguments are elevated. It would be unethical and immoral to proceed with the Notice 201 proposal to deploy “sustainable utilisation” ideology in the absence of substantiating (by evidenced based, peer-reviewed science) the pre-requisite Constitutional conservation benefits of the proposed trade in rhino, giraffe, hippopotamus, or elephant meat.



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## 10 Recommendations

### 10.1 Meat Safety Act

The proposed inclusion of trade in rhinoceros, giraffe, hippopotamus, or elephant meat to Schedule 1, as provided in section 1 (2) of the Meat Safety Act, 2000 (Act No. 40 of 2000) is not supported by any independent, peer-reviewed science as not likely to be detrimental to the survival of the species. Therefore, the proposed inclusion of all genus of rhinoceros, giraffe, hippopotamus, or elephant into the Meat Safety Act as proposed Government Notice 201 of 2020, Government Gazette, No. 43050, Department of Agriculture, Land Reform and Rural Development, dated 28 February 2020 should be rejected.

In the circumstances, it is suspected that there is similarly no independent peer-reviewed science to support the inclusion of all 98 species listed in Notice 201 into the Meat Safety Act – hence, it is recommended that Notice 201 should be rejected in entirety, based upon the potential human health implications and concerns alone, with the precautionary risk principle applied in the absence of supporting science that proves the risks are known and acceptable.

### 10.2 Animal Improvement Act

The [species added](#) to the AIA Table 7 was at the behest of Minister Senzeni Zokwana (Department of Agriculture, Forestry and Fisheries (DAFF)) as notified in [Gazette 42464, 17 May 2019, Amendment to AIA, Table 7](#). However, no public consultation took place before the [listed species](#) were added to the AIA, in clear contravention of the [AIA](#), Paragraph 2(2):

*"In the **case of a new kind of animal** or a new breed of such kind of animal to be imported into or to be bred in the Republic, the Minister shall make such declaration after considering the request, taking the international law into consideration and after considering comments received in response to an invitation by the registrar to **interested persons** to comment on a proposed declaration that had been published in the Gazette at least 30 days prior to such declaration"*

There is also a clear contradiction between the inclusion of wildlife species within the Animal Improvement Act and the risks of genetic pollution, as identified as a major threat within South Africa's own National Biodiversity Strategy and Action Plan as a research priority:



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*“Research priorities that emerged through the process of developing the revised NBSAP include research on/into....The impact of current and future threatening processes on biodiversity, and mechanisms for adaptation, management and mitigation for example research to address genetic pollution (e.g. colour variance) linked to requirements of the hunting industry and research on risk assessments and how they are conducted” – [“2nd National Biodiversity Strategy and Action Plan 2015 – 2025,”](#) Republic of South Africa, Department: Environmental Affairs*

In light of the potential serious health risk that the wildlife trade from South Africa poses, the AIA amendments are likely to increase that risk to:

- a) abattoir workers and other workers in the wildlife industry in South Africa;
- b) consumers of wildlife products in South Africa and globally; and
- c) animals in countries to which South Africa is allowed to export live specimens.

Plus of course, the potential onward human consumption of wildlife *“meat”* and/or *“animal products”* which the DALRRD is responsible for ensuring are fit for animal and/or human consumption. Therefore, there is a need for an immediate risk assessment of all such existing and proposed wildlife trade in *“meat”* and *“animal products”* emanating from South Africa, with restrictions and moratoriums on such trade an urgent precautionary risk requirement.

In the circumstances, the DALRRD should immediately rescind in full the amendments announced in [Gazette 42464, 17 May 2019, Amendment to AIA, Table 7.](#)



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## 11 Bibliography

Africa Geographic, 2013 – "[South Africa's trophy hunt industry linked to rhino horn trafficking ... AGAIN](#)"

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

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](#)"

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](#)"

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 2019 - "[Giraffa camelopardalis \[Giraffe\] to Appendix II of the Convention](#)"

Cruise, A., 2018 - "[Umbabat's beloved lion to become trophy hunters' targets](#)," Conservation Action Trust

The EMS Foundation (via Cullinan & Associates attorneys), to The Honourable Ms Thoko Didiza, Minister for Agriculture, Land Reform and Rural Development, 15 April 2020 - "[Wildlife Trade and Coronavirus](#)"

Kenny, D.E., September 1999 - "[Salmonella spp. Survey of Captive Rhinoceroses in U.S. Zoological Institutions and Private Ranches](#)," *Journal of Zoo and Wildlife Medicine*, Vol. 30, No. 3 (Sep., 1999), pp. 383-388, [American Association of Zoo Veterinarians](#)



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

Kuntze, A.; Burger, M.; Jancke, S.; Topfer, I. *Monatsh Veterinarmed*, Sept. 15, 1975, v. 30 (18), p. 703-705, "[Exungulation of all extremities in a female elephant in consequence of a smallpox infection](#)"

EMS Foundation and Ban Animal Trading, 2018 - "[The Extinction Business, South Africa's 'Lion' Bone Trade](#)"

EMS Foundation, 16 March [2020] - "[Proposed Publication of Amended Threatened or Protected Species Regulations and Lists](#)"

EMS Foundation, via Cullinan & Associates attorneys, 15 April 2020 - The Honourable Ms Thoko Didiza, Minister for Agriculture, Land Reform and Rural Development - "[Wildlife Trade and Coronavirus](#)"

EMS Foundation, via Cullinan & Associates attorneys, 15 April 2020 - The Honourable Dr Zwelini Mkhize, Minister for Health - "[Wildlife Trade and Coronavirus](#)"

Ginkel, A., 2016 - "[Who's Actually Killing and 'Making a Killing' from Rhino?](#)" IWB

Harvey, R., 2018 - "[The Economics of Captive Predator Breeding in South Africa](#)" - South African Institute of International Affairs (SIIA)

Hemmer, C.J.; Littmann, M.; Löbermann, M.; Meyer, H.; Petschaelis, A.; Reisingera, E.C., 2010 - "[Human cowpox virus infection acquired from a circus elephant in Germany](#)," *Science*, <https://doi.org/10.1016/j.ijid.2010.03.005>

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), 7 August 2019a - "[High Court Rules in Favour of Lions and NSPCA](#)"

International Wildlife Bond (IWB), 24 August 2019b - "[CITES CoP 18 Updates](#)"

International Wildlife Bond (IWB), 2 September 2019c - "[Rhino Horn Trade - Public Consultation](#)"

International Wildlife Bond (IWB), 21 October 2019d - "[Animal Farm](#)"

International Wildlife Bond (IWB), 7 April 2020a - "[Open Letter to the World Health Organisation \(WHO\)](#)"



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

International Wildlife Bond (IWB), 8 April 2020b - "[Living with wild animals part two – eat them like there's no tomorrow](#)"

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

Johnson, C.K.; Hitchens, P.L.; Pandit, P.S.; Rushmore, J.; Evans, T.S.; Young, C.C.W.; Doyle, M.M., 8 April 2020 - "[Global Shifts in mammalian population trends reveal key predictors of virus spillover risk](#)," The Royal Society Publishing, 8 April 2020

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.

Maas, B., 2016 - "[A quantitative assessment of supply and demand in rhino horn and a case against trade](#)," NABU International, Berlin

Milliken, T. and Shaw, J., 2012 – "[The South Africa – Viet Nam Rhino Horn Trade Nexus](#)," TRAFFIC

Alejandro Nadal, A. and Aguayo, F., The Leverhulme Centre for the Study of Value, Manchester, 2014 - "[Leonardo's Sailors: A Review of the Economic Analysis of Wildlife Trade](#)"

Parliamentary Monitoring Group, 12 March 2019 - "[Captive Lion breeding: DEA progress report; Rhino Demand Management; with Minister](#)"

Pinnock, D., 5 July 2018 – "[Digging for the truth about Skye](#)," Daily Maverick

Pinnock, D., 16 October 2019 - "[By the stroke of a legislative pen, a list of iconic and in some cases endangered wild animals can now be manipulated as farming stock. What happens next is anyone's guess](#)," Daily Maverick

Quartz Africa, 5 October 2017 – "[Hippos are being pushed towards extinction by an insatiable demand for their teeth](#)"

Republic of South Africa - [Meat safety Act, 2000 \(Act 40 of 2000\)](#)

Republic of South Africa - [Animal Disease Act 35 of 1984](#)

Republic of South Africa – "[Controllable and Notifiable Animal Disease](#)," Department: Agriculture, Food and Fisheries (DAFF)



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

Republic of South Africa - [Animal Health Act 2002 \(No. 7 of 2002\)](#)

Republic of South Africa - [Foodstuffs, Cosmetics and Disinfectants Act, 1972 \(Act 52 of 1972\)](#)

Republic of South Africa - [Animal Improvement Act \(AIA,\) 1998](#)

Republic of South Africa - [National Environmental Management Biodiversity Act \(NEMBA\), 2004](#)

Republic of South Africa - [National Environmental Management Laws Amendment Bill \(NEMLAB\)](#)

Republic of South Africa - [Threatened or Protected Species Regulations](#) as amended, Notice 388 of 2013, Gazette 36375, 16 April 2013

Republic of South Africa, Department: Environmental Affairs - ["2nd National Biodiversity Strategy and Action Plan 2015 – 2025"](#)

Republic of South Africa, High Court of South Africa (Gauteng Division, Johannesburg), 13 September 2018 - ["Case 86515/17"](#)

Republic of South Africa, 17 May 2019 – ["Additional Lists to Table 7, Animal Improvements Act \(AIA\), 1998,"](#) Notice 664, Gazette 42464

Republic of South Africa, High Court of South Africa (Gauteng Division, Johannesburg), 6 August 2019 - ["Judgement – Case 86515/17"](#)

Republic of South Africa, Department: Environmental Affairs, 22 August 2019 - ["Non-detriment findings for \*Ceratotherium simum simum\* \(white rhinoceros\) - Consultation in Terms of Section 62\(3\) of the National Environmental Management: Biodiversity Act, 2004 \(Act No. 10 of 2004\),"](#) Notice 1105, Gazette 42660, Vol. 650

The Conversation, 14 November 2019 - ["South Africa struggles to manage wildlife ranching: why it's a problem"](#)

The Guardian, 6 April 2020a - ["Bronx zoo tiger tests positive for coronavirus"](#)

The Guardian, 8 April 2020b - ["Human impact on wildlife to blame for spread of viruses, says study"](#)

The Independent, 18 April 2020 - ["We knew this was coming': Coronavirus pandemic was preventable, ZSL chief says"](#)



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

Science, Vol. 368 Issue 6488, p 221 -222, 17 April 2020 - "[From mice to monkeys, animals studied for coronavirus answers](#)"

Shi, J. ; Wen, Z.; Zhong, G.; Yang, H.; Wang, C.; Huang, B.; Liu, R; He, X.; Shuai, L.; Sun, Z.; Zhao, Y.; Liu, P.; Liang, L.; Cui, P.; Wang, J; Zhang, X.; Guan, Y.; Tan, W.; Wu, G.; Chen, H.; Bu, Z., 8 April 2020 - "[Susceptibility of ferrets, cats, dogs, and other domesticated animals to SARS–coronavirus 2](#)," Science, DOI: 10.1126/science.abb7015

United Nations Office on Drugs and Crime (UNODC), 2012 - "[Environmental crime the trafficking of wildlife and timber](#)"

United Nations Office on Drugs and Crime (UNODC), 2016 - "[World Wildlife Crime Report - Trafficking in protected species](#)"

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