

Public Participation Submission

of the Coalition

To Stop the Captive Breeding and Keeping of Lions

and Other Big Cats for Commercial Purposes

June 2019

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1. INTRODUCTION

Since 2008, more than 6,000 lion skeletons weighing a total of approximately 70 tonnes have been exported from South Africa to Southeast Asia (Williams *et al.*, 2017a) for use in Asian traditional medicine practices (Williams *et al.*, 2017b). Since 2017, the Department of Environmental Affairs (now Department of Environment, Forestry and Fisheries (DEFF)) has set a legal annual export quota of 800 lion skeletons, making South Africa the largest legal exporter of lion bones and skeletons.

The setting of this legal lion bone quota lacks a sound scientific basis and is driven solely by the economic principle of supply and demand, i.e. South African lion breeders can produce more lion skeletons than the set quota and have built up stockpiles. Mr Mpho Tjiane (Deputy Director CITES Policy Development & Implementation - DEFF) confirmed this during the Colloquium on the Captive Lion Breeding Industry in August 2018. The precautionary principle has clearly not been applied.

Dr Mark Jones (Head of Policy – Born Free Foundation) argued during the 2018 Colloquium that since the failure of attempts to push through restrictive legislation in 2010, DEFF has effectively facilitated the growth of the industry through enabling provinces to issue permits for lion breeding, canned hunting and more recently bone exports.

Even though the South African lion bone trade is perceived to be a by-product of the trophy hunting industry, a study of skeleton exports in 2017 found that 91% included the skulls (EMS Foundation & Ban Animal Trading, 2018), indicating that many facilities exist purely to supply the Southeast Asian bone trade (Schroeder, 2018). This was confirmed by Williams and 't Sas-Rolfes (2017 & 2019), who found about one-third of the facilities breed and keep lions for the trade of bones and other lion products, even though their respondents' numbers represent only a small section of the industry.

It is not clear that exploiting surplus captive-bred lions for their derivate parts can satisfy market demand. To the contrary, legally available supply may both fuel demand and provide a laundering channel for illegal supply (Harvey, 2016 & 2018). This is especially concerning since the vast majority of exported lion skeletons (98%) are destined for Laos and Vietnam, which are known hubs for illegal wildlife trafficking, including South African rhino products and/or derivatives.

The lion bone trade also absorbs 'surplus' animals that are often in ill health or otherwise suffering the effects of poor treatment (Schroeder, 2018), highlighting the serious welfare concerns associated with this industry.

It is well-known that poor animal welfare is linked to the occurrence of diseases in animals. Considering that wild animals have not had the immunological evolution that domestic animals have been subjected to over the many years of domestication, there is a risk that unknown pathogen strains are introduced into the environment via captive wild animals. Some of these pathogens may even be zoonotic.

The captive lion breeding industry and substitute lion bone trade has been legitimised through an interpretation of Section 24 of the Constitution of the Republic of South Africa by DEFF, referred to as the aggregative approach.

Bilchitz (2017) interrogates what constitutes 'sustainable use' as envisaged and intended in Section 24 through the integrative approach, which adopts the attitude of respect for the individuals that make up a species, an ecosystem or the components of biodiversity. This approach received approval from the Constitutional Court which agreed that animal welfare and conservation are intertwined concepts. In other words, the protection of animal welfare is part of the environmental right in Section 24 of the Constitution.

The captive lion breeding industry is (in theory) currently legal, although the conditions in which many of these animals are kept, are arguably unlawful in terms of existing animal protection legislation, such as the Animals Protection Act.

However, the fact that this industry is currently legal, does not make it ethically, morally or socially acceptable. Both nationally and internationally, the industry is considered unethical even by prestigious international hunting organisations and pro-sustainable use countries.

In 2016, the IUCN World Conservation Congress issued a Motion (No. 009) urging the Government of South Africa to “terminate the practice of breeding lions in captivity for the purpose of 'canned shooting' through a structured, time-bound process” and to “restrict captive breeding of lions to registered zoos or registered facilities whose documented mandate is as a recognised, registered conservation project.”

Even though Williams & ‘t Sas-Rolfes (2019) suggest that the captive lion industry plays a positive supporting role for lion conservation and acts as a buffer against overexploitation of wild lions, this premise is based solely on comments made by players with a vested interest in the captive lion industry and has no supporting scientific evidence.

Based on the above and further arguments presented below, the undersigned request DEFF to reconsider their current position on the lion bone quota and immediately prohibit the lion bone trade through setting a 2019 zero quota.

2. CONSERVATION VALUE OF CAPTIVE-BRED LIONS?

In its 2015 [Biodiversity Management Plan for the lion](#) in South Africa, the then DEA recognised that “captive lions are bred exclusively to generate money and currently have limited conservation value.”

In February 2016, the African Lion Working Group (ALWG) issued a [statement](#) that “captive-bred lion hunting, which is defined by ALWG as the sport hunting of lions that are captive bred and reared expressly for sport hunting and/or sport hunting of lions that occur in fenced enclosures and are not self-sustaining, does not provide any demonstrated positive benefit to wild lion conservation efforts and therefore cannot be claimed to be conservation”.

The statement concluded whilst more data were needed, the international lion bone trade that is currently being supplied by the South African captive-bred lion industry, may fuel an increased demand for wild lion bones elsewhere, thereby negatively impacting on wild lion populations. The ALWG firmly stated that the captive breeding of lions for sport hunting, hunting of captive-bred lion and the associated cub petting industry are not conservation tools.

Similarly, in November 2017, 25 of the world’s leading lion conservation and research organisations [submitted a letter](#) to the then US Secretary of the Interior, Mr Ryan Zinke, regarding the request made by the South African Predator’s Association (SAPA) to uplift the importation ban of captive bred lion trophies. The submission comprised of individuals with extensive experience, scientific knowledge and credibility in the field of lion biology, conservation and management.

The submission stated that captive lion breeding, an intensive type of land management, in no ways contributes to biodiversity conservation, or support claims of benefits for meso-carnivores and veld rehabilitation. The IUCN Red data List states that the most prolific threats to wild lions are a lack of

safe and suitable space, and conflict with people (Bauer *et al.*, 2016). The captive breeding of lions does not address these threats and therefore is of no conservation value.

Lindsey *et al.* (2012) recognise that there is not “sufficient data from which to draw firm conclusions about the relationships between the markets for wild and captive-bred lion hunting”. They conclude that “further research is urgently required into the issue of the trade of lion bones from South Africa to identify the potential risks and issues for lion conservation”. So far, the Scientific Authority has only commissioned research on the economics of the lion bone trade, but no lion conservation research.

3. PROBLEMATIC REGULATION AND LEGISLATION

There are numerous problems with the current regulation of captive bred lions and the activities and commercial exploitations in which they are utilized. It is important to note there is a growing body of evidence internationally that requires welfare to be included in environmental law.

A few such matters have been included in this section, which is non-exhaustive. References to legislation are as at the current date with the relevant amendments.

Jurisdictional issues

- A number of jurisdictional issues exist with the current regulation of wild animals generally, and lions in particular. These include jurisdictional issues:
 - between DEFF and the Department of Agriculture, Rural Development and Land Reform (DARDLR);
 - between national government and provincial governments; and
 - between the provinces themselves.
- Although the Constitution grants concurrent jurisdiction in relation to environmental matters to both the national and provincial governments, the status quo is ineffective and has led to uncertainty and lack of accountability and transparency.

Industry self-regulation

- Due to the lack of explicit requirements specified in legislation, the industry has promulgated its own ‘[norms and standards](#)’. It is notable, however, that these are unenforceable, voluntary standards. They are insufficient in terms of both their content and enforcement (CER & ETW, 2018).
- It is unclear how SAPA enforces its own standards, whether this is done consistently, and what real value such standards have.
- What is clear (for example, from the [recent discovery on the farm of a SAPA member](#) (Mr Jan Steinman) is that the current situation is completely unacceptable.
- There are other voluntary standards (that is, in addition to those of SAPA), but again, these do little to ensure the protection of the animals and instead effectively enshrine their use and abuse (CER & ETW, 2018).

Enforcement

- Aside from the purported industry enforcement, there is lack of enforcement by DEFF, DARDLR and provinces themselves (that is, where any protective provisions exist at all).
- [DEFF reported](#) in March 2019 that nearly 40% of the 227 registered 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.

- The South African Police Services (SAPS), while mandated to do so, rarely enforce these issues, and the NSPCA and local SPCAs are extremely under-resourced and do not have the capacity to monitor effectively the hundreds of breeding operations around the country.

Permitting requirements

- Furthermore, the permitting system is flawed in various respects, including:
 - Incongruent and inconsistent interpretation, application and enforcement of national biodiversity conservation legislation inter- and intra-province. This leads to legal uncertainty and undermines mandatory conservation imperatives;
 - Lack of transparency and public participation enables exploitation of the national biodiversity conservation legislation.
- At a minimum, there needs to be a standardised and transparent permitting system (CER & ETW, 2018).

Lack of requirements to start a business

- Aside from permitting requirements and specific requirements of the current regulation (among others NEMA, NEMBA, TOPS and provincial ordinances), there are no specific requirements to start a captive lion breeding or related business.
- For example, there is no requirement that an operator should have the knowledge and qualifications necessary for the responsible management of wild animals. Given the many incidents of neglect and predator attacks alone, it is imperative that a set of standard requirements be enforced in all such commercial operations.

Court Judgements

- In 2016, the Constitutional Court stated that the human right to environment was connected to animal welfare. It expressly recognized the integrative approach (Bilchitz, 2017) and stated: “correctly links the suffering of individual animals to conservation and illustrates the extent to which showing respect and concern for individual animals reinforces broader environmental protection efforts. Animal welfare and animal conservation together reflect two intertwined values.”
- Justice Edwin Cameron’s minority judgment in *Openshaw*¹ recognised that animals are worthy of protection not only because of the reflection that this has on human values, but because animals “are sentient beings that are capable of suffering and of experiencing pain”.
- The High Court in *South African Predator Breeders Association*² championed this view. A unanimous Full Bench found that canned hunting of lions is “abhorrent and repulsive” due to the animals’ suffering. On appeal, the Supreme Court of Appeal did not dispute this finding.
- The Supreme Court of Appeal in *Lemthongthai*³ explained in the context of rhino poaching, that “[c]onstitutional values dictate a more caring attitude towards fellow humans, animals and the environment in general”. The Court concluded further that this obligation was especially pertinent because of our history. Therefore, the rationale behind protecting animal welfare has shifted from merely safeguarding the moral status of humans to placing intrinsic value on animals as individuals.
- *Lemthongthai* is also notable because it relates animal welfare to questions of biodiversity. Animal welfare is connected with the constitutional right to have the “environment protected . . . through legislative and other means”.

¹ *National Council of Societies for the Prevention of Cruelty to Animals v Openshaw* [2008] ZASCA 78; 2008 (5) SA 339 (SCA) (*Openshaw*) at para 38. (<http://www.saflii.org/za/cases/ZASCA/2008/78.html>)

² *South African Predator Breeders Association v Minister of Environmental Affairs and Tourism* [2010] ZASCA 151; [2011] 2 All SA 529 (SCA). (<http://www.saflii.org/za/cases/ZASCA/2010/151.html>)

³ *S v Lemthongthai* [2014] ZASCA 131; 2015 (1) SACR 353 (SCA) (*Lemthongthai*) (<http://www.saflii.org/za/cases/ZASCA/2014/131.html>)

- These statements by the judiciary, particularly the country's two highest courts, must be considered by the executive in these decisions, as well as the values contained in the supreme constitution and their interpretation.

Constitutional Considerations

- The right to "Environment" enshrined in Section 24 of South Africa's Constitution, has been interpreted to focus on but one provision, which refers to the "ecologically sustainable use" of resources. This interpretation has protected, and even promoted, the commodification of wildlife and is utilized to justify abhorrent practices that do not benefit conservation.
- The conclusions of the judiciary in any of the aforementioned cases have not been reflected meaningfully in subsequent policy or legislative amendments or decision-making.
- The interpretation by DEFF of Section 24 is problematic and is not in line with the aforementioned Constitutional Court judgement. Besides, it is not in line with general public opinion and values. The industry benefits very few, whilst the consequences affect the entire current and future populations of the country.
- Furthermore, there is an issue with the lack of consultation with interested and affected independent scientific experts, NGOs and with the public at large. In fact, there appears to have been consultation only with the captive lion industry and other beneficiaries.
- DEFF engages with the Wildlife Forum, which is composed mostly of hunting organisations. DEFF has failed to include relevant NGOs despite numerous requests to do so. It has only been in the last couple of months that organisations, such as the Endangered Wildlife Trust and NSPCA, have become members.

DEFF High-Level Panel

- In December 2018, the (then) Minister of Environmental Affairs [announced](#) her intention to appoint a High-Level Panel (HLP) relating to *inter alia* lions. The composition of the panel has yet to be announced.
- Of additional concern was the wording of the call for nominations to the HLP, which stated that nominees "must be persons who....are committed to and subscribe to the objectives and principles of conservation and sustainable use".
- In light of the above, as well as pending litigation in this regard, it is unclear how the quota may legitimately be determined until such time as the HLP has been implemented with experts represented from all relevant fields and stakeholders (including NGOs).

Failure by DEFF to comply with Parliamentary Portfolio Committee of Environmental Affairs report

- In August 2018, a colloquium was held on the captive lion breeding industry by the Parliamentary Portfolio Committee of Environmental Affairs (PPCEA). where a wide variety of stakeholders made submissions. This resulted in a [final Report](#) (published in November 2018).
- This report resolved that the Department should, as a matter of urgency, initiate a policy and legislative review of captive breeding of lions for hunting and the lion bone trade with a view **to putting an end to this practice.**
- This was subsequently adopted as a resolution of Parliament.
- However, in March 2019, DEFF released a [statement](#) that it would rather see the continuation of this industry through the establishment of norms and protocols — in other words, better regulation.
- It is noteworthy that during the abovementioned Colloquium the (then) Minister of Environmental Affairs stated that if the industry was shut down, the lions "would have no value". It is clear that the value of lions is not limited to their use in commercialised breeding operations and this statement by a representative of the department tasked with protecting them is hugely problematic.

Workers and safety concerns

- There are no specific legislated safety protocols for workers in the captive lion breeding industry. This has led to abuses of workers who are tasked with handling these animals with little or no protection. Such workers are generally persons of colour, who take on this risk (see also section on Zoonosis).
- Thus, the law fails to protect not only lions but also the persons tasked with handling them.

Slaughter, Safety and Health Requirements

- The [Meat Safety Act](#), 40 of 2000, provides some protections for animals and the humans who consume them. It is pertinent that lions are not included in the ambit of the Act and are thus not subject to the mandatory welfare protocols (such as stunning prior to slaughter) that apply to farmed animals in abattoirs. This is in spite of the fact that not only the bones but the meat and other body parts of the slaughtered lions are destined for human consumption. It is evident from the most recent inspections, as well as other reports, that lions in captive bred facilities also suffer from diseases, including [tuberculosis](#), which can be transferred to humans.
- To date, there appears to have been little concern with, let alone any regulation pertaining to, the handling of zoonotic diseases in this industry.
- We are aware of the so-called “[eco-farm](#)” that conducts lion slaughter. What is unclear is the monitoring of this facility and other legal and regulatory requirements applicable thereto.

Historical Considerations

- It should be noted that there have previously been attempts by the DEFF to better regulate this industry, but these have been thwarted for various reasons including the aforementioned Predator Breeders Case, administrative challenges, and the non-promulgation of draft regulations.

Mere property

- In addition to the above concerns, there is the fundamental problem of the animals concerned being viewed and treated as mere property, with no value unless commercially exploited.
- This has become the dominant view in spite of animals’ intrinsic value having been recognised and affirmed by the Constitutional Court. In addition, lions along with other wildlife bringing incalculable value to the nation and economy of South Africa, and all of its people.
- South Africans have a fundamental interest in how these animals are treated and in the protection of our heritage, including wildlife, for future generations. These are therefore major matters of public concern.

4. ANIMAL WELFARE

The legal regulation of wild animal welfare in South Africa follows the traditional, but outdated, distinction between animal welfare and biodiversity conservation. Captive wild animals under the physical control of humans, whether held temporarily or permanently, straddle the divide between interdepartmental and concurrent national and provincial jurisdiction, due to a statutory regime unintended and unsuited for addressing the issue of wild animal welfare. (CER & EWT, 2018)

There are no national norms and standards for the breeding and keeping of predators in captivity to address animal welfare and health concerns, an issue that straddles the mandates of DEFF and DARDLR. Even though welfare is alleged by DEFF to not be within their mandate, surely it must be this Department’s duty to abide by existing legislation, such as the Animal Protection Act of 1962 and the Performing Animals Protection Act.

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.

In the breeding and keeping of lions for the lion bone trade there is no incentive to keep lions in a healthy condition, when all that is to be used are their skeletons. In an attempt to maximise profits, welfare is not a priority for many lion facilities and the lack of adequate basic animal welfare conditions, such as sufficient water, food, shelter and medical care, is inevitable.



There are a [number of slaughterhouses for the lion bone trade](#) that are springing up around the country, where [lions are kept in cramped cages](#), unable to stand up let alone turn round, and often without access to adequate food and water. Lions are kept waiting sometimes for days for their turn to be slaughtered, often shot with compound bows in front of one another, with no veterinarian present, and skinned and dissected where they fall.

South African Predator Association (SAPA) Norms & Standards

- SAPA have developed norms and standards that are binding on all SAPA members and failure to comply with them is supposed to lead to disciplinary action and possible expulsion of the offender, according to the [SAPA website](#).
- According to these norms and standards, for “proper welfare within the lion industry” it must be ensured that no animal suffers from “undue hunger, thirst or malnutrition”, “undue fear and distress”, “undue physical or thermal discomfort” and “undue pain, injury or disease”. The qualification “undue” effectively negates all of the standards set and makes enforcement subjective, contentious and to all intents and purposes impossible.
- SAPA has only a handful of accredited captive lion breeding facilities and about 125 members, which is a tiny proportion of the whole industry (Harvey, 2018).
- 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) 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.



Tourism facilities

- Animal welfare issues associated with tourism interaction facilities, such as lion cub petting and walking with lions include, *inter alia*, the following (Barker, 2018; Cadman, 2009):
 - The practice of removing cubs from their mothers sometimes within days of birth in order to trigger oestrous in the adult female, so she can breed again as soon as possible;
 - The practice of cub petting that involves the handling of cubs for up to 8-10 hours per day, when such animals should be sleeping most of that time;
 - A substandard quality of life for the lions and other predators kept in enclosures as tourist attractions.
- International tourism associations, such as ABTA in the UK and the ANVR in the Netherlands, have turned their backs on unethical captive wildlife interactions due to animal welfare concerns.

5. ILLEGAL TRADE

As far back as 2012, Julian Rademeyer in his book *Killing For Profit* made the connection between the lion bone trade and rhino poaching, where both lion bones and rhino horn were being shipped via Thai national, Chumlong Lemtongthai, to one of the biggest wildlife traffickers in the world, [Vixay Koesavang](#). The latter is the kingpin of the Xaysavang syndicate. In 2013, the US Government announced a US\$1 million reward for information “leading to the dismantling” of this key wildlife crime network.

According to Williams *et al.* (2017a), Xaysavang's involvement in the lion bone trade precedes their involvement in the rhino horn trade. The company started legally procuring lion bones from farmers as early as February 2008 when the first CITES export permit was issued.

However, supply and demand dynamics of illicit wildlife trade are difficult to establish without reliable data, as criminal syndicates and illegal retail outlets are not in the business of making audited financial statements publicly available (Harvey, 2018).

Lions

- [CITES identifies](#) that “the significant increase in trade in produced animals has given rise to some concerns related to the control of the production and trade, including false or incorrect declarations of the source of the animals”.

- Many of South Africa’s lion bone traders sell through bone agents or intermediary traders in either South Africa or internationally, which gives an indication of the potential for parallel illegal markets and/or potential laundering of the proceeds of trade in illegal products (Williams & ‘t Sas-Rolfes, 2017 & 2019).
- Legal international trade in lion bones from captive-bred lions could serve as a cover for illegally wild-sourced lion (and other big cat) parts (Nowell & Pevushina, 2014).
- It is clear that a parallel illegal market has been in place for some time and the connection of bone traders to organised crime is well established (EMS Foundation & Ban Animal Trading, 2018).
- Research by World Animal Protection (WAP) highlighted that several brokers of Chinese origin operate out of Durban and Johannesburg exporting bones illegally via both shipping routes and cargo airlines.
- By 2017, there were just four South African exporters listed on CITES permits, namely SH Rothman, Hatari Taxidermy (Klerksdorp), MP Steyl (associated with Williamson Savuti Taxidermy) and Andries van Tonder (Krugersdorp), and seven importers in Vietnam, [Lao PDR](#) and Thailand. Although the official CITES export permits contain a name and address of the supposed exporter and importer, many of the destination addressees and addresses could not be satisfactorily verified, and telephone numbers and identification or passport numbers were often missing (EMS Foundation & Ban Animal Trading, 2018).
- There are also discrepancies between permits issued in South Africa, exports recorded on the CITES Trade Database and what the importing country records as having been received.
- Further anomalies have been suspected in the lion bone trade with the number of CITES permits issued allegedly exceeding the actual 2017 quota. Williams and ‘t Sas-Rolfes (2017) confirm the there is indeed “sufficient reason to believe that some consignments had more bones than allowed by the [CITES] permits”. EMS Foundation & Ban Animal Trading (2018) findings showed an average weight per exported skeleton of between 11-30 kg, whereas a full lion skeleton weights on average only 9 kg. One consignment of 71 lion skeletons weighted 1,580 kg or an average of 22 kg per skeleton!
- Clearly these discrepancies cannot all be clerical errors, which leads to the conclusion that there are illegal shipments taking place on a regular basis.
- WAP also has evidence that lions are poached from national parks, particularly Kruger Park, which are sold to lion breeders/dealers for about ZAR 45,000 per animal.

Tigers and ligers

- Many of the lion breeders now also breed tigers and their bones are being shipped out as lion bones.
- Tigers are also being crossed with lions in order to create bigger animals and thus more skeleton, so that the carcasses will fetch a higher price.
- Sale of tiger bone products is illegal in Southeast Asia. Hence, South Africa is complicit in the illegal trade by not only illegally supplying tiger bones, but also lion bones in ever increasing quantities, knowing that they are finally sold to the end user as tiger bone.

Legal and illegal slaughterhouses

- In 2018, a whistle-blower, Armand Gerber, disclosed the existence of a lion slaughterhouse on Wag ’n Bietjie farm in the Free State, established purely to kill lions for their skeletons.
- Later that year, an [illegal Vietnamese lion and tiger bone syndicate](#) operating in the North West Province was uncovered. A joint Task Force saw the arrest of eight people and a ninth suspect handed himself over to police after the operation, which exposed the killing of allegedly 40 lions at a lion farm near Klerksdorp. Six of the suspects are Vietnamese nationals.

- Several lion farms have their own in-house processing plants and lion bones are boiled into “cakes” before being shipped, thus circumventing the need for bone permits (EMS Foundation & Ban Animal Trading, 2018).

Regional and cross-border trafficking

- Sources have confirmed that lions are also illegally trafficked by organised crime syndicates into South Africa from the SADC region, to maintain the supply of animals in the lion breeding facilities, and to meet demand for body parts.
- A typical example is a lioness killed in Botswana, her cubs smuggled across the border to SA and the carcass taken out via a different route. A key problem, as explained by one customs official, is that once the lions reach their destinations in South Africa, it is virtually impossible to prove their point of origin.
- This shows that South Africa’s captive lion industry poses a direct threat to wild lion populations in Southern Africa.

The illegal activities described above are only a glimpse into what happens in reality. However, it is clear that the total number of lion (and illegal tiger) skeletons exported from South Africa far exceeds the legal quota of 800.

6. IMPACT ON BRAND SA

The captive lion industry is directly linked to tourism with 45% of the facilities generating some income from tourism (Williams & ‘t Sas-Rolfes, 2019).

In March 2017, Dr Paul Funston (Senior Director of Panthera’s Lion Programme) said in a [media statement](#) on South Africa’s lion bone quota: “it is confounding that a country whose iconic wild lions are such a source of national pride—not to mention tourist revenue—would take such risks to sustain a marginal captive breeding industry that is condemned globally for its shameful practices. The legal farming of lions for tourists to bottle feed, pet, and ultimately hunt in tiny enclosures is a stain on South Africa’s reputation as stewards of Africa’s wildlife.”

The fact that the captive lion breeding industry tarnishes South Africa’s image as a conservation leader and damages our tourism industry, is supported by [Sisa Ntshona](#) (CEO - SA Tourism), who said there is a growing concern “internationally that we are seeing damaging our reputation...is a perception of our stance on animal interactions and canned hunting that might be potentially putting tourists off”.

South Africa’s tourism brand value could potentially be negatively affected by as much as ZAR 54 billion loss in revenue over the next decade, if the captive lion breeding industry is allowed to continue and if the assumptions behind the quantification hold in practice (Harvey, 2018, p76). Even if only a small proportion of this projected damage is realised, the losses would still be significant, because they will further undercut the already stretched budgets for biodiversity conservation.

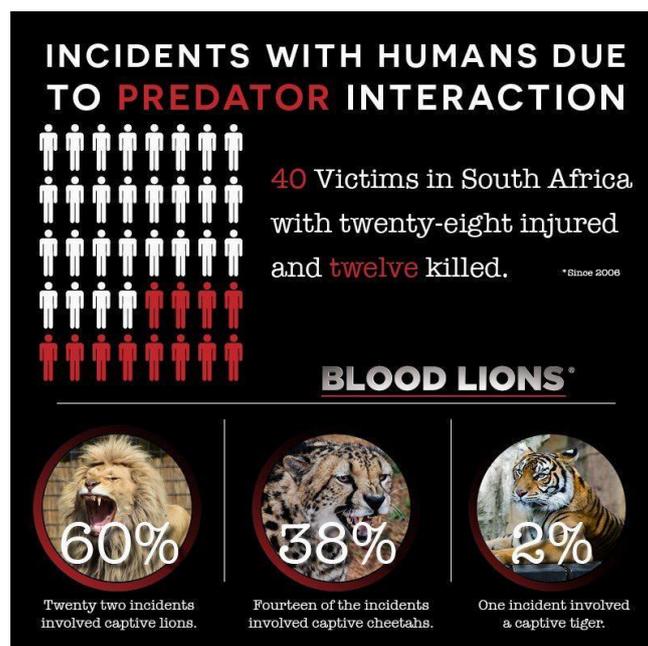
Economic importance

- According to the World Travel & Tourism Council (WTTC), in 2017 travel and tourism’s total contribution was ZAR 412.5 billion to South Africa’s economy, 8.9% of the total GDP, and supporting 9.5% of total employment (1,530,500 jobs). The forecast is for this to continue to rise.
- The captive predator breeding industry provides about 613 jobs or, if adding a multiplier effect, at best 1,162 jobs (Van Der Merwe *et al.*, 2017).

- Based on an average figure of US\$606,459 in gross annual revenue for 47 facilities that offer human interaction (excluding hunting), and assuming that another 250 facilities generate similar revenue, the total gross revenue could be around US\$180 million per year (ZAR 2.67 billion). Given that the industry employs only 613 people, it can be safely assumed that most of this money accrues to a small handful of owners.
- However, in the greater tourism context, this total gross revenue is minimal. If the abovementioned WTTC figure for tourism revenue is used, captive lion interactions account for only 0.6% of South Africa's total tourism income. The continued protection of this disreputable industry is clearly not worth the risk to the country's tourism reputation, especially considering that the captive lion industry itself is economically unstable (Williams & 't Sas-Rolfes, 2019).
- The revenues generated by the lion bone trade, while highly lucrative for the owners, are even smaller compared to South African's tourist revenue, an industry that is threatened to be undermined.
- Even the trophy hunting industry believes that the captive breeding of lions is leading to reputational damage, translating into a 43% decline in income from hunting between 2014 and 2016, as stated by Mr Paul Stones (Custodians of Professional Hunting and Conservation – South Africa) during the Colloquium in 2018.

Global trends

- Global trends of responsible tourism are showing that tourism is moving away from exploitative wildlife interactions. Nationally, the Southern Africa Tourism Services Association ([SATSA](#)) is currently developing guidelines for a more ethical captive wildlife in tourism industry.
- The cub petting, walking with lions and voluntourism sector are closely related to the captive lion breeding and lion bone trade. Many tourists, especially the paying international volunteers, are often unaware that they are contributing to the perpetuation of an industry that generates revenue off false pretexts and they deprive local workers of employment opportunities in the process (Harvey, 2018).
- There is also a [significant risk to human safety](#), including fatalities, through physical interactions with habituated lions and other carnivores, resulting in at least 37 incidents affecting no less than 40 victims since 1996, including 12 deaths.



- The global awareness of the lack of ethics in the captive lion breeding industry is growing. Many global campaigns and marches have focussed on stopping the captive lion breeding industry, millions of people have signed online petitions targeting among others the lion bone trade, and 40+ major international airlines have since August 2015 refused the cargo of lion trophies (CACH UK & SPOTS, 2018). In addition, countries like Australia, France, the Netherlands and USA have implemented bans on the import of lion trophies (Williams & 't Sas-Rolfes, 2018). This should be of major concern, as many of the countries involved are among South Africa's largest tourism source markets.

But this negative worldwide image can easily be reversed to a PR win, by banning captive lion breeding and the lion bone trade. This would show the world that South Africa can lead the way on animal welfare and ethical wildlife tourism.

7. A FALSE PREMISE - LACK OF SCIENTIFICALLY PROVEN BENEFITS OF LION BONES FOR TCM

Although tiger bone, alongside other body parts, have been used in the production of traditional medicines and tonics for centuries as a general tonic and to treat a variety of ailments including arthritis, rheumatism, back problems, general weakness, and headaches, there is no credible evidence for the efficacy of the vast majority of these remedies. Where experimental evidence suggests that tiger bone may have beneficial health effects, for example as an adjuvant treatment for breast cancer (Li *et al.*, 2017), calcium and collagen are identified as the likely active substances, and they can easily be obtained from alternative sources.

China banned the use of tiger bone in traditional medicines in 1993 and removed tiger products from its Traditional Medicine Pharmacopoeia. However, since that time tiger farms have expanded rapidly across parts of China and other Asian countries and thriving black and grey markets for tiger bones and other products exist.

Although lion body parts are sought locally in some parts of Africa (CITES, 2014) as 'muti' (traditional African medicines), lion bones have never been a recognised ingredient of traditional Asian medicines. Nevertheless, the demand in Asia for lion bones as an alternative to tiger bones has increased in recent years due to decline in tiger numbers and a ban on the use of tiger products. There is evidence of a [growing demand specifically for lion bone](#).

A ban on the export of lion bones and other body parts derived from wild lions was agreed at the 17th Conference of the Parties to CITES in 2016. However, lion bone derived from captive breeding facilities in South Africa can still be traded legally into international markets under a quota determined by the South African authorities (CITES, 2018a). This sends confusing messages to potential consumers specifically, as well as to the wider public.

The TRAFFIC report entitled 'The Legal and Illegal Trade in African Lions' acknowledges that poaching of lions for trade in body parts is an emerging threat (CITES, 2018b). It also highlights that increasing demand for lion bone and other lion products in Asia may have an impact on wild lion populations across their range, as well as on other big cat populations.

Surveys of consumers in Beijing by Zhao Liu *et al.* (2016) identified a preference for wild-sourced products over farmed products, because of increased perceived effectiveness. This is a direct threat to wild lion populations. Levels of actual or potential demand for traditional medicines are not well understood, but product legitimization resulting from ongoing legal sales of captive-bred lion bones could bring a great many consumers into the market, providing opportunities for poachers and traffickers to target wild animals and thereby frustrating enforcement efforts.

The dynamics of endangered wildlife populations can be dramatically influenced by disease, especially when these populations are small and isolated, with increased risk of inbreeding (Trinkel *et al.*, 2011) such as is typical of captive lion breeding facilities. Professor Paul van Helden, Stellenbosch University, states that the organism that most commonly causes lion tuberculosis (TB) is *Mycobacterium bovis* (*M. bovis*), which causes bovine TB. *M. bovis* can infect other mammals, [including humans](#). He adds that this differs very slightly from that species most often causing human TB. However, this organism has the propensity to cause TB in humans often in organs other than the lung, making it very difficult to diagnose.

Similarly, *Mycobacterium tuberculosis* is also transmissible from humans to a wide range of domestic and wild animal species, most frequently living in close, prolonged contact with humans e.g. in captive settings from cattle to captive elephants (Paudel *et al.*, 2019). The bacillus is very difficult to eradicate as it can survive extremes of temperature and moisture. Professor Emeritus Modlin adds that the export of infected lion bone carcasses would represent the potential for introducing a TB epidemic in individuals working with and ingesting contaminated bone (letter available upon request).

The captive lion breeding industry therefore poses a significant risk to human health and safety by zoonosis including tuberculosis, parasite transmission and possible exposure to lethal immobilising compounds (if the animal is humanely immobilised before being shot) that may have deposited in the bones (see also Section “Zoonosis”).

The Assembly of the World Health Organization (WHO) announced in May 2019 that Traditional Chinese Medicine (TCM) will be included in the [11th revision of the International Classification of Diseases \(ICD\)](#). Panthera, the worldwide wild feline protection association, the Environmental Investigation Agency (EIA) and Wildlife Conservation Trust asked the [WHO to censure TCM’s use and its part in the decline of wild animal populations around the globe](#).

With WHO endorsement, growth of TCM is expected, potentially increasing the pressure on species such as lion. In August 2019, the Consortium for Globalization of Chinese Medicine (CGCM) is hosting a symposium in Shanghai, China. The “Chinese Medicine Resources” category includes “Protection and Substitutes of Endangered Species”. With the significant threat to human health and safety, it is clear that substitutes are critical to conserve biodiversity.

By continuing to set quotas for captive-bred lion bones, South Africa is encouraging consumers to continue to seek products for which there is no proven efficacy, and puts humans, wild lions and other big cats at increased risk.

8. ZOOZOSIS

There is a real and substantial risk of zoonosis in the lion bone trade. Zoonosis is an infection or disease that is transmissible from animals to humans under natural conditions, including tuberculosis (TB). As indicated in the previous section, there is a particular risk of zoonosis from *M. bovis*, which causes TB in lions. The WHO estimated that *M. bovis* is the causative bacterium in 3% of all TB cases (WHO, 1994).

The PPCEA mentioned this issue in Point 7.9 of their adopted report following the Colloquium in August 2018. Please also refer to the ‘Dying for a Myth’ paper (Park, 2018), which was submitted to the PPCEA for consideration. This paper was written with input from three world-renowned scientists, namely Professors [P. van Helden](#), [N. Kriek](#) and [J. Modlin](#). It was also reviewed by Professor [V. Mizrahi](#).

Background

- Wild animals serve as reservoirs for *M. bovis* and nearly all warm-blooded animals are affected (Ayele *et al.*, 2004). In South Africa, *M. bovis* has occurred in baboon, blesbok, buffalo, bushbuck, bush pig, cheetah, common duiker, eland, honey badger, hyaena, impala, kudu, large spotted genet, leopard, lion, and suricate (Bekker *et al.*, 2012; Hlokwe *et al.*, 2011).
- Game ranging in South Africa is expanding and approximately one-third of farmers have both domestic and 'game' animals, which can increase the potential for 'cross-over' of diseases, especially considering that 41% have no control measures to prevent this kind of cross-infection (Bekker, 2011; Oberem & Oberem, 2011).
- *M. bovis* (or bovine TB) is considered a multi-host disease (Michel *et al.*, 2006) and animals are infected by inhaling dust particles, as well as by ingestion of contaminated feed or water (CFSPH, 2009).
- Bekker (2011) showed that in South Africa there are only a few registered 'game' abattoirs, which are mostly used for export purposes, and that the real number and location of 'game' slaughter facilities located on 'game' farms are unknown to the relevant authorities. Almost no meat inspection is done on 'game' farms.

Mycobacterium bovis and the lion bone trade

- Whilst there is no conclusive proof that we are exporting *M. bovis* in lion bones, there is also no proof that we are not. The risk we are exporting *M. bovis* in lion bones is however real.
- It has never been scientifically proven how long the *M. bovis* bacterium remains alive in lion bones. According to Professor Modlin, both ingesting and inhaling will cause different strains of TB and potentially cancer. Tom Frieden, the head of the US Centre for Disease Control in the Obama era, stated that the dry TB bacilli can live in the pages of a book for up to seven years.
- South Africa risks finding itself in a precarious legal position should it transpire that we have exported lion bones infected with *M. bovis*.
- Williams and 't Sas-Rolfes (2017) state that countries like Thailand have a preference for bones with more meat on them, which means that the bones have not been properly cleaned, thus increasing the risk of zoonosis.

Occupational health hazard

- "Spillover" of *M. bovis* to rural communities is increasing (Zinsstag *et al.*, 2008) and the risk to human health and safety of farmers, farm workers, hunters, slaughter staff, veterinarians, and processors posed by zoonosis (Bekker *et al.*, 2012), and possible exposure to lethal immobilising compounds, is considerable.
- The risk of contracting *M. bovis* TB by South African lion abattoir workers is very real and people with HIV are even more susceptible (Ayele *et al.*, 2004) due to their compromised immune systems.
- There are no health and safety precautions (e.g. face masks) at a hunt or at the taxidermists, so workers are potentially exposed every time a lion is killed.
- There is a further problem of illegal abattoirs that are springing up around the country, where health and safety precautions do not exist.
- The *M. bovis* bacterium will also be present in any meat and organs that may be given to farm workers (Williams & 't Sas-Rolfes, 2019).
- Very possibly we could be sitting on a human rights issue too, with all the farm, slaughterhouse, and taxidermy workers, who have no idea they may be at risk of contracting TB from the lion bones they are working on. Both DEFF and the lion farm owners could find themselves cited in a class action suit.
- Recently, there has been an outbreak of TB in domestic cats in the UK, where several owners of individual cats were infected (O'Halloran *et al.*, 2019).

- The Precautionary Principle has to apply here and thus a zero quota, until such time as independent testing is carried out on the captive lion population. Hence, we should not be exporting lion bones and the setting of a quota, which in any event is fraudulently circumvented, is moot.

REFERENCES

Ayele, W., Neill, S., Zinsstag, J., Weiss, M. and Pavlik, I. (2004) Bovine tuberculosis: An old disease but a new threat to Africa. *International Journal of Tuberculosis and Lung Disease*, 8(8), 924–937.

Bekker, J.L. (2011) A food safety plan for game meat in South Africa. D. Tech thesis, Pretoria, Dept. of Environmental Health, Tshwane University of Technology.

Bekker, J.L., Hoffman, L.C. and Jooste, P.J. (2012) Wildlife associated zoonotic diseases in some southern African countries in relation to game meat safety: A review. *Onderstepoort Journal of Veterinary Research*, 79(1), Art. #422, 12 pages. (<http://dx.doi.org/10.4102/ojvr.v79i1.422>)

Bilchitz, D. (2017). Exploring the relationship between the environmental right in the South African Constitution and protection for the interests of animals. *South African Law Journal*, 134(4), 740-777.

Barker, M. (ed) (2018) *Compassionate Travel: A guide to animal-friendly holidays*. Horizon Guides, Sheffield.

Bauer, H., Packer, C., Funston, P.F., Henschel, P. & Nowell, K. (2016) *Panthera leo* (errata version published in 2017). The IUCN Red List of Threatened Species 2016: e.T15951A115130419. (<http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T15951A107265605.en>)

CACH UK and SPOTS Netherlands (2018) Captive lion breeding, canned lion hunting & lion bone trade: Damaging Brand South Africa? (<https://conservationaction.co.za/wp-content/uploads/2018/08/CACH-Brand-SA-Review-August-2018.pdf>)

Cadman, M. (2009) *Lions in captivity and lion hunting in South Africa – an update*. NSPCA, Alberton.

Center for Food Security and Public Health (CFSPH) (2009) Bovine tuberculosis. College of Veterinary Medicine, Iowa State University, Iowa. (<http://www.cfsph.iastate.edu>)

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

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (2014) *Panthera Leo* – Report of Kenya and Namibia (AC27 Doc 24.3.3). Twenty-seventh meeting of the Animals Committee, Veracruz. (http://www.cms.int/sites/default/files/document/ac27_cites_periodic_rev_status_african_lion_acr_oss_range_e.pdf)

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (2018a) Species specific matters - *Panthera Leo* (SC70 Doc 54.1). Seventieth meeting of the Standing Committee Rosa Khutor, Sochi. <https://cites.org/sites/default/files/eng/com/sc/70/E-SC70-54-001.pdf>

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (2018b) The Legal and Illegal Trade of African Lions – a study in support of decision 17.241 E. Thirtieth meeting of the Animals Committee, Geneva.

EMS Foundation & Ban Animal Trading (2018) The Extinction Business: South Africa's Lion Bone Trade.

Harvey, R. (2016) Risks and Fallacies Associated with Promoting a Legalised Trade in Ivory. *Politikon*, 87, 1–15.

Harvey, R. (2018) The economics of captive predator breeding in South Africa. Cape Town. (https://saiia.org.za/wp-content/uploads/2018/08/Harvey_180818_WorkingPaper_PredatorBreedingSA.pdf)

Hlokwe, T.M., Jenkins, A.O., Streicher, E.M., Venter, E.H., Cooper, D., Godfroid, J. *et al.* (2011) Molecular characterisation of *Mycobacterium bovis* isolated from African buffaloes (*Syncerus caffer*) in Hluhluwe-iMfolozi Park in KwaZulu-Natal, South Africa. *Onderstepoort Journal of Veterinary Research*, 78(1), 6. (<http://dx.doi.org/10.4102/ojvr.v78i1.232>)

IUCN World Conservation Congress (2016) Terminating the hunting of captive-bred lions (*Panthera leo*) and other predators and captive breeding for commercial, non-conservation purposes. Motion no. 009. (<https://portals.iucn.org/congress/motion/009>)

Li, Y., Zhang, Z., Cui, F., Liu, J., Wang, Y., Jiang, J. *et al.* (2017) Traditional Chinese Medicine Bionic Tiger Bone Powder for the Treatment of AI-Associated Musculoskeletal Symptoms. Evidence-based Complementary and Alternative Medicine, 2017(2478565), pp 8. (<https://doi.org/10.1155/2017/2478565>)

Lindsey, P., Alexander, R., Balme, G., Midlane, N. and Craig, J. (2012) Possible relationships between the South African captive-bred lion hunting industry and the hunting and conservation of lions elsewhere in Africa. *South African Journal of Wildlife Research*, 42(1), 11-22.

Liu, Z., Jiang, Z., Fang, H. Li, C., Mi, A., Chen, J. *et al.* (2016) Perception, Price and Preference: Consumption and Protection of Wild Animals Used in Traditional Medicine. *PLoS ONE*, 11(3): e0145901. <https://doi.org/10.1371/journal.pone.0145901>

Van Der Merwe, P., Saayman, M., Els, J. and Saayman, A. (2017) The economic significance of lion breeding operations in the South African Wildlife Industry. *International Journal of Biodiversity and Conservation*, 9, 314–322.

Michel, A.L., Bengis, R.G., Keet, D., Hofmeyr, M., Klerk, L.M.D., Cross, P.C. *et al.* (2006) Wildlife tuberculosis in South African conservation areas: Implications and challenges. *Veterinary Microbiology*, 112(2-4), 91–100. (<http://dx.doi.org/10.1016/j.vetmic.2005.11.035>)

Nowell, K and Pervushina, N. (2014) Review of implementation of Resolution Conf. 12.5 (Rev. CoP16) on Conservation and trade in tigers and other Appendix-I Asian big cats. IUCN and TRAFFIC report prepared for the CITES Secretariat, 65th meeting of the CITES Standing Committee, Geneva, 7-11 July. Geneva (http://cites.org/sites/default/files/eng/com/sc/65/E-SC65-38-A01_0.pdf)

Oberem, P. and Oberem, P. (2011) A guide to animal diseases in South Africa: Game, Briza, Pretoria.

O'Halloran, C., Loannidi, O., Reed, N., Murtagh, K., Dettemering, E., Van Poucke, S. *et al.* (2019) Tuberculosis due to *Mycobacterium bovis* in pet cats associated with feeding a commercial raw food diet. *Journal of Feline Medicine and Surgery*, 1-15. (<https://doi.org/10.1177/1098612X19848455>)

Park, L. (2017) Dying for a Myth – a report on the danger of transference of TB from lions to humans. Voice4Lions.

Paudel, S., Mikota, S.K., and Tsubota, T. (2019) Tuberculosis threat in Asian elephants. *Science*, 363(6425), p. 356. (<https://doi.org/10.1126/science.aaw2342>)

Schroeder, R.A. (2018) Moving Targets: The 'Canned' Hunting of Captive-Bred Lions in South Africa. *African Studies Review*, 1–25.

Trinkel, M., Cooper, D., Packer, C. and Slotow, R. (2011) Inbreeding depression increases susceptibility to Bovine Tuberculosis in lions: an experimental test using an inbred-outbred contrast through translocation. *Journal of Wildlife Diseases*, 47(3), 494-500.

Williams, V.L. and 't Sas-Rolfes, M. (2019) Born captive: A survey of the lion breeding, keeping and hunting industries in South Africa. *PLoS ONE*, 14(5): e0217409. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0217409>

Williams, V.L. and 't Sas-Rolfes, M. (2017) South African Lion Bone Trade. SANBI interim report.

Williams, V.L., Loveridge, A.J., Newton, D.J. & Macdonald, D.W. (2017a) A roaring trade? The legal trade in *Panthera leo* bones from Africa to East-Southeast Asia. *PLoS ONE*, 12(10): e0185996. (<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0185996>)

Williams, V.L., Loveridge, A.J., Newton, D.J. & Macdonald, D.W. (2017b) Questionnaire survey of the pan-African trade in African lion body parts. *PLoS ONE*, 12(10): e0187060. (<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0187060>)

World Health Organization (1994) Zoonotic tuberculosis (*Mycobacterium bovis*), Memorandum from a WHO meeting with the participation of the Food and Agriculture Organization. *Bulletin of the WHO*, 72(6), 851–857.

Zinsstag, J., Kazwala, R., Cadmus, I. & Ayanwale, L. (2008) *Mycobacterium bovis* in Africa. In *Mycobacterium bovis* infection in animals and humans, pp. 199–210, Blackwell, Oxford. (<http://dx.doi.org/10.1002/9780470344538.ch19>)