

Putting a stop to cruelty:

why South Africa's commercial captive lion industry should be shut down for good





Photo: Lions at a publicly accessible commercial captive lion facility in South Africa. At these facilities, lions often live in filthy, overcrowded enclosures and in substandard conditions that fail to meet their basic hygiene, diet, and veterinary needs. Image for illustrative purposes captured in public access captive lion facilities. Images from closed-access facilities mentioned in this report have been withheld to protect source identity. Credit: World Animal Protection / Roberto Vieto

Executive summary

South Africa's commercial captive lion breeding industry has been under scrutiny for at least two decades, but in particular since 2019, when the Government's Department of Forestry, Fisheries and the Environment (DFFE) effectively stopped the legal export of lion bones. Subsequently in 2021, a High-Level Panel (HLP) report led the Minister for DFFE to announce that all commercial exploitation of captive lions would be phased out, and a process would be established to shut down facilities for good.

This was a critical moment in the movement to end the captive breeding of lions and other big cats for commercial purposes in South Africa. However, in late 2022, a Ministerial Task Team was asked to "develop and implement a voluntary exit strategy and pathways for captive lion facilities". This was the first time the term "voluntary" had been used in public government communications on this issue, raising concerns about political will as well as the effectiveness of this type of approach.

While the voluntary exit option will be helpful for those willing to transition, World Animal Protection believes it would dilute the aim to end commercial captive lion breeding in South Africa, and it won't achieve the goals set out in the DFFE's HLP report that was adopted by cabinet. Asking commercial captive lion breeders to voluntarily phase-out breeding is just the first step; a compulsory time-bound end to the industry is vital.

Cover: Lion in a publicly accessible commercial captive lion facility in South Africa. Image for illustrative purposes. Images from closed-access facilities mentioned in this report have been withheld to protect source identity Credit: World Animal Protection / Roberto Vieto

Executive summary

As the High-Level Panel report (2020) states:

- The commercial captive lion industry threatens South Africa's reputation with associated political and economic risks.
- The commercial captive lion industry threatens South Africa's reputation as a leader in the conservation of wildlife and as a country and destination with iconic wild lions.
- The commercial captive breeding of lions is culturally dispossessing of the spiritual value of lions to communities and cultures in South Africa.
- The commercial captive breeding of lions poses major concerns over work conditions and safety of workers and tourists, and zoonotic disease risks.
- The commercial captive breeding of lions does not contribute meaningfully to the conservation of wild lions.
- The commercial captive breeding of lions creates major welfare contraventions in the industry in general.

The commercial captive lion breeding industry in South Africa is controversial, posing risks to animal welfare and public health, and is tarnishing the country's tourism and conservation reputation. This report highlights how some commercial lion farms are connected to wildlife crime and lions housed there are subject to unethical and cruel conditions, stressing the need to end the industry to help monitor and control international illegal trade in lion body parts for traditional medicine and decorative purposes. And these concerns are not limited to lions. We are also calling for an end to the farming of all big cats in South Africa to address welfare, health, conservation, and legal issues.

Our Ask

We strongly urge the DFFE and the Minister to publicly commit to a mandatory phase-out of the commercial captive lion breeding industry in South Africa. Ending this risky and exploitative practice goes beyond the protection of lions alone, it is also about protecting South Africa's rich biodiversity and ensuring a sustainable future for people and wildlife. As one of the most biodiverse countries in the world, South Africa has a unique opportunity to become a champion for wildlife conservation and protection.

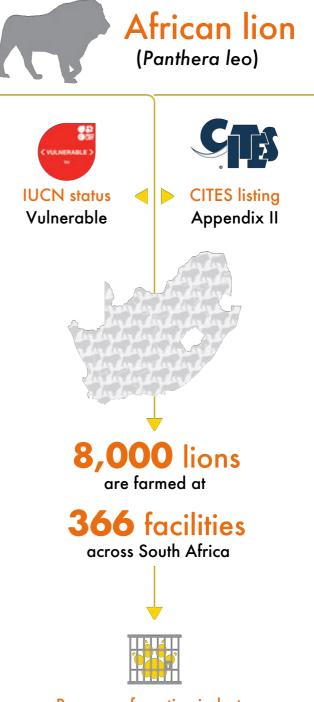
Introduction

The captive lion breeding industry in South Africa is cruel and controversial. It poses risks to animal welfare and public health, and tarnishes the country's tourism and conservation reputation, and economy. South Africa currently has more lions in captivity than in the wild. There are an estimated 8,000 lions farmed in more than 350 facilities across the country¹. Farmed lions are used for multiple industries. They are exploited as entertainment attractions for tourists, either as part of "canned" trophy hunting (i.e., hunting of captive-bred wild animals in small enclosures with no chance of escape) or as interactive encounters like cub petting and 'walk with lions' experiences and voluntourism. They are also used for traditional medicine, where their body parts - particularly their bones – are exported to Asia for use in traditional Asian medicine. Lion body parts are not only traded for traditional medicine, but parts such as claws and teeth are made into jewellery and their skins are sold as luxury goods. Hundreds of captive bred live lions are also exported annually, predominantly to China, Thailand, Pakistan, Vietnam and Bangladesh, mostly to zoos, for commercial purposes, and breeding in captivity.

This industry has been under scrutiny for at least two decades, but in particular since 2019, when the South African High Court declared the lion bone export quota unconstitutional. As a result, South Africa's export quota was deferred, resulting in a zero quota, i.e., no lion skeletons - including bones, claws, skulls and teeth - could be exported for commercial purposes², making subsequent exports effectively illegal³. Nonetheless, the commercial lion breeding industry in South Africa has continued to operate legally, and a lack of enforcement on the illegal export of lion bones has created a legal grey area leading to confusion and non-compliance.

In December 2020, the government released the report of the High-Level Panel (HLP) that was appointed to review policies, regulatory measures, practices and policy positions related to hunting, trade, captive keeping, management and handling of elephant, lion, leopard and rhinoceros. This report led to the Minister of DFFE's public decision in May 2021 to stop the commercial exploitation of captive lions and establish a process to shut down facilities, an intention that was adopted by Cabinet. This was a critical moment in the ongoing discussion of the captive breeding of lions and other big cats for commercial purposes in South Africa.

Captive lion industry in South Africa



Purpose of captive industry

Farmed lions are exploited for a range of lucrative tourism activities (from canned trophy hunting to interactive encounters like cub petting, 'walking with lions' experiences and voluntourism) and their body parts, particularly their bones, are used in traditional Asian medicine

But in late 2022, a Ministerial Task Team (MTT) was asked to "develop and implement a voluntary exit strategy and pathways for captive lion facilities". The term "voluntary" had not been used in previous public communications on this issue, raising concerns about political will as well as the effectiveness of this type of approach.

The MTT's efforts to provide voluntary exit options for captive lion facilities is a step in the right direction for facilities ready to make the transition and will enable testing of the approach taken to generate important insights and learnings. However, World Animal Protection believes that solely relying on voluntary phaseouts dilutes the goal of ending commercial captive lion breeding for good. Instead, we suggest that voluntary exit options should only serve as a starting point, followed by a mandatory phase-out based on what is learned during the voluntary phase. While we appreciate the Minister and DFFE's vision to phase-out the industry, the ultimate goal should still be to end commercial captive lion breeding entirely.

In this report, we describe the negative impact of this industry and delve into why a mandatory, time-bound phase-out along a preset pathway is the most effective way to achieve significant change for captive lions in South Africa.

A voluntary approach to ending the commercial captive lion breeding industry alone may have negative consequences unless it is part of a broader mandatory plan to stop the lion farming industry:

- It may prioritise short-term profits over the broader concerns outlined in the HLP report.
- It may make the fate of the industry a personal, commercial decision instead of a considered response to the various issues outlined in the HLP report.
- It may result in less governance and oversight, likely leading to illegal activity during the transition.
- It could lead to a harmful resurgence of the industry in the future.
- It may distract from meaningful change and only result in minor improvements that do not meet the DFFE's stated goals.
- It could increase tensions with industry stakeholders, prolong the transition process, and require more resources.

Key recent policy developments in South Africa's commercial captive lion industry

High Court rules that the 2017 and 2018 CITES lion bone export quotas were "unlawful and constitutionally invalid". **Environmental Affairs** imposes a moratorium on the export of lion skeletons

August 2019

Ministry of Forestry, Fisheries and the Environment appoints High Level Panel to review policies, legistation and practices on matters of lion, elephant, leopard and rhino management, breeding, hunting, trade and handling

October 2019

High Level Panel report approved by Cabinet and National Assembly

April 2021

Minister Barbara Creecy, Minister of Forestry and Fisheries and Environmental Affairs, announces that South Africa intends to bring an end to commercial captive lion industry as per majority recommendations from the High Level Panel

May 2021

Minister Creecy appoints a Ministerial Task Team to develop and implement a voluntary exit strategy for comercial captive facilities

December 2022

Source: Blood Lions www.bloodlions.org

A grim picture: new evidence of cruel and illegal activity at "secret" lion farms

The current state of the lion farming industry in South Africa is concerning. With unclear regulations and weak enforcement, illicit activities are allowed to thrive. This risks animals' welfare and threatens the country's reputation. In fact, the decision of the High Court to declare the lion bone export quota unconstitutional in 2019 was in response to the industry's disregard for the welfare of the lions. Despite the government's publicly stated intent to shut down the industry, commercial lion breeding is still legal, and the illegal international bone trade has continued to operate alongside it. The South African Revenue Service (SARS) initially claimed it was not aware that lion bone exports were illegal but has since stated that "controls will be put in place"³, with some recent arrests being made⁴⁻⁶.

World Animal Protection was provided evidence from brave sources who will be kept anonymous for their own protection. They provided insights into how some closed-access (i.e., not open to the public) lion farms actually operate. Startling revelations emerged from these sources at two separate closedaccess commercial lion facilities (Facility A and B), shedding light on the disturbing practices of 'secret' lion farms in this country. Despite the 2021 public decision by the DFFE to cease lion farming, the government has not introduced legislation to put their intention into action, and evidence from these sources paints a grim picture of the industry's continued participation in insidious illegal and inhumane practices. The lack of enforcement, exacerbated by loopholes in legislation, has conveniently concealed these practices, perpetuating unethical and harmful activity within the industry.

Canned trophy hunting and the illegal international bone trade

At Facility A, male and female lions are kept for canned trophy hunting and the illegal international big cat bone trade. Adult lions are bought from various breeding facilities for each hunt, and the hunting happens legally in a purpose-built enclosure on the facility's premises. Hunting usually takes place from May to August, and labourers handle the tracking, skinning, and bone

preparation of hunted lions. One source revealed that instead of slowing down operations in response to the 2021 DFFE decision, Facility A anticipates a steady flow of hunting clients⁷. More than thirty lions were hunted in 2022, and repeat clients have already booked hunts for 20237. The source said they invested a lot of money to prepare for the 2023 hunting season at the facility. They bought multiple lions, fixed enclosures and lodges, and hired a professional hunter to help clients get good shots so the lion trophies look presentable⁷. At least 17 lions were seen on the premises in 2023⁷. Illegal and cruel hunting practices are also occurring at Facility A. The legal minimum release period before a hunt in North West province is 96 hours⁸, but lions are allegedly hunted within an hour of release⁷, indicating non-compliance to provincial regulations pertaining to the industry. One source claimed that a veterinarian illegally supplies sedation drugs to non-certified personnel for a fee to aid canned hunting. There was also a reported incident where a lion was shot while still groggy and not fully alert from the back of a hunting safari vehicle⁷. The hunting of sedated lions is completely illegal and contravenes the national TOPS (Threatened or Protected Species) Regulations and hence the permit conditions that would need to be obtained for any lion hunt.



Photo: Lions and tigers are often slaughtered and processed on-site at commercial captive breeding farms in South Africa. Image is for illustrative purposes and was not taken at the closed access facilities described by the anonymous sources in this report. The images and footage that was provided has been withheld to protect source identity. Credit: Lord Ashcroft KCMG PC

Facility B keeps lions for canned trophy hunting and the illegal international bone trade. It also facilitates both lion and tiger hunts for a largely Asian client base that visits the closed-access premises⁷. Labourers are employed at the facility to skin and prepare the bones of hunted animals. Testimony from a source at Facility B indicated that "unethical" hunting practices occur. For example, while the official stipulation regarding the minimum area required for a hunt is 1,000 hectares in North West province, the source alleged that hunts were conducted in an enclosure measuring less than one hectare, which is an illegal practice due to non-compliance with provincial regulations. No tracking of lions or tigers occurs at the facility, as the animals are killed in this relatively small, purpose-built on-site hunting enclosure. The facility is multi-purpose, as alongside canned hunting, it also engages in breeding lions and tigers. This is confirmed by reports of multiple lion and tiger cubs born on the premises in 2023⁷. Tigers and lions from various age classes are transported to the facility from other breeding facilities several times a year. In 2022, the facility held over 30 lions and tigers.

Confidential sources report that the owners of Facilities A and B are in contact with each other and transfer lions and tigers between their premises. Both facilities are well-suited for the illicit international big cat bone trade. All animals are slaughtered and processed on-site, with up to four animals processed by each labourer per day at Facility A during busy periods. The skin, paws, and skull of lions are prized trophies by hunters at Facility A, while the bones and skeleton are sold to an "Asian bone buyer" who regularly visits from Johannesburg⁷. The bones are either packed into cardboard boxes or may be left intact as a full carcass to certify authenticity and ensure tracking devices have not been inserted into the bones. Sources at Facility A reported they prepared "a lot more" lions for the bone trade in 2022 than in previous years. Facility B limits its main customer base to Asian customers, and all tigers and lions killed in the past year were used to supply the illegal international bones and parts trade.

Photo: Lions and tigers are often slaughtered and processed on-site at commercial captive breeding farms in South Africa. Up to four big cats can be processed by each labourer per day during busy periods. Pictured: Lion carcass. Image is for illustrative purposes only. It was not taken at the closed access facilities described by the anonymous sources in this report. The images and footage that was provided has been withheld to protect source identity. Credit: Copyright Lord Ashcroft KCMG PC



Photo: The bones and skeleton of slaughtered lions from commercial captive breeding farms in South Africa can be sold for use in traditional Asian medicines, while their skin, paws, and skull are prized trophies by hunters. Pictured: Lion bones. Image is for illustrative purposes only. It was not taken at the closed access facilities described by the anonymous sources in this report. The images and footage that was provided has been withheld to protect source identity. Credit: Copyright Lord Ashcroft KCMG PC



Organised crime and exploitation

The big cat bone trade in South Africa has attracted concern due to the historical uncertainty surrounding the legality of the trade³ and reports of organised crime groups' involvement⁸. These groups have used front or shell companies to smuggle lion bones into other countries, including Laos³, which reportedly received half of South Africa's lion bone exports between 2016 and 2019³. There is evidence that criminal networks involved in illegal rhino horn trafficking have also been involved in the illegal lion bone trade from as early as 2009. One of the main groups involved in this trade is the Xaysavana Network, based in Laos. While our sources did not reveal any direct connection to a specific network, it's clear that both hunting facilities are illegally selling lion and tiger bones internationally⁷. Sources are worried that they and their families could be physically harmed if they share information about the facilities and how they operate, which further suggests connections to the criminal world. This adds to the existing concerns that many employees in commercial lion farms are underpaid, have no written contracts, and receive no sick leave, allowing them to be exploited. Sources informed us that

labourers in both facilities worked in unsafe conditions; for example, they had no proper protective gear while handling live lions and tigers or their carcasses⁷. They earned between ZAR 3,000-3,500 per month and, as far as we were made aware, received no additional financial benefits. Given the concern for workers' wellbeing, we cannot disclose the names of the facilities or other details that could identify our sources.

Sources revealed that some commercial lion facilities use legal activities like hunting to hide their involvement in the illegal bone trade. These facilities use various tools and tactics, such as security cameras, patrols and messaging apps to avoid detection during inspections. Corruption among wildlife enforcement officials and a lack of resources and proper record-keeping also make it difficult for authorities to manage the industry and ensure facilities comply with the law^{2,10}. The facilities described by sources appear to have legal operations connected to illegal trading. They are unlikely to leave the industry voluntarily, even with the government's plan to phase them out. This means that the legal lion trade could continue to be used as a cover for illegal activities.

Insights from two "off grid" facilities into unethical and illegal practices

Legal but cruel Illegal



Lion cub is legally born Cubs are separated at a commercial captive breeding facility in South Africa



from their mothers at days to weeks old and used in interactive "cub petting" experiences for paying tourists and volunteer.



As the cubs get bigger, they are used for other interactive tourism activities such as 'walking with lions' experiences.



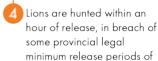
When the lion is too big for interactive experiences, they are killed in a canned trophy hunt - within a small enclosure with no chance of escape. Their skin, paws, and skull are prized trophies by the hunter.



The bones from the hunted lion are dried, packed into a cardboard box, and illeaally exported to Asia for use in traditional Asian medicine.



Lions are shot while still groggy and not fully alert from the back of a hunting safari vehicle, contravening national TOPS Regulations. Hunts are conducted in an enclosure measuring less than one hectare, which is an illegal practice due to non-compliance with provincial regulations.



96 hours.

Graphic: The commercial captive lion breeding trade chain in South Africa, showing how a web of illegal and unethical practices within the legal but poorly regulated industry can easily emerge. Note: this is an illustration of how lion cubs legally bred in South Africa are being exploited for the illegal international big cat bone trade, based on anonymous source information. It does not reflect the experience of every lion born at commercial captive lion breeding facilities in South Africa.

Risks to lion welfare and public health

Commercial lion breeding facilities in South Africa have been consistently criticised for their poor conditions 11 and the unregulated nature of the industry. Lions are still suffering 12 today and pose disease risks to both people and other wild and domesticated animals¹³. As such, adopting a time-bound mandatory phase-out of the commercial captive lion breeding industry is urgent.

Lion farms often have poor living conditions for lions leading to poor welfare, with too many lions in overcrowded spaces and insufficient veterinary care 11,14. These conditions make it extremely difficult to meet even basic hygiene, space, diet, and veterinary needs. As a result, lions can experience disease as well as negative behaviours like self-mutilation, abnormal pacing, aggression, and fighting, leading to injuries, pain and even death¹⁵.

The media has reported extremely grim conditions and suffering at some lion breeding facilities^{11,14}, exposed during inspections conducted by South Africa's National Council of Societies for the Prevention of Cruelty to Animals (NSPCA)¹⁶. NSPCA inspections of 95 lion farms during 2016 and 2017 found that nearly half were housing lions in substandard conditions; 32 were issued noncompliance welfare notices along with 18 warnings of misconduct as per the Animals Protection Act of 1962¹⁶. During visits to these facilities, inspectors found numerous problems such as unclean and unsuitable enclosures, inadequate diet, lack of activities to stimulate the lions, insufficient shelter, and a lack of medical care for injured or sick lions¹⁶.

TIVE PREDATOR ATTACKS TO HUMAN INTERACTION IN SOUTH AFRICA 52 big cat attacks reported involving Many more attacks may have gone unreported #CANCELCAPTIVITY Note For Line BLOOD LIONS

Keeping many lions in the same area can also increase the chance of disease spreading because of poor hygiene, diet, or stress¹⁷. African lions, whether in captivity or the wild, can be infected with at least 63 harmful organisms 13. Some of these, like Babesia parasites, Mycobacterium bovis (which causes tuberculosis), canine distemper virus, canine parvovirus, and feline panleukopenia virus (FPLV), can cause serious health problems and even death in lions. Symptoms can include weight loss, hair loss, diarrhoea, seizures, and depression¹³.

Managing and preventing diseases on commercial lion farms is difficult because underlying diseases can suddenly appear due to high-stress situations, such as repeated pregnancy and lactation 18. Breeding lions in small populations can also result in inbreeding and increase the risk of infectious diseases like bovine tuberculosis 19. Separating cubs from their mothers and providing alternative milk formulas can also lead to nutritional deficiencies²⁰ and weaken their immune systems, making them more susceptible to diseases²¹.

Captive lions can carry pathogenic organisms that can also be transmitted to humans. People who work with lions at breeding facilities can be at serious risk of zoonotic diseases - such as Human Ehrlichiosis, Human Babesiosis, Toxocariasis, Trichinosis and African Sleeping Sickness¹³ - due to regular contact with the animals²². The large scale of these facilities and the number of people involved in the lion bone and trophy trade increase the risk of disease transmission. The handling of lion derivatives during transport, slaughter, and preparation by multiple 'middlemen' also presents a risk for disease transmission²³, especially in unregulated slaughterhouses that don't follow official hygiene standards²⁴.

There have also been recent escapes of tigers in South Africa, risking the safety of workers, visitors, and the public²⁵. Many big cat attacks have occurred in South Africa, resulting in injuries and deaths. Between 1996 and 2020, 52 lion, tiger and cheetah attacks were reported involving 58 people, including at least 13 children. Two-thirds of these attacks involved tourists, and a third resulted in fatalities. Many more attacks have likely gone unreported²⁶.

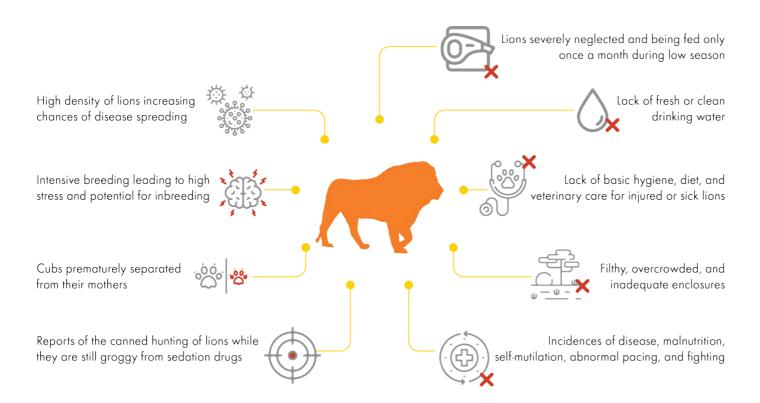
Infographic: Human attacks by big cats in South Africa between 1996 and 2020. Source: Blood Lions

Captive lions can transmit diseases to humans such as Human Ehrlichiosis, Human Babesiosis, Toxocariasis, Trichinosis and African Sleeping Sickness. This is a serious risk especially for people who work closely with lions at breeding facilities.

During low hunting tourism seasons in non-public access breeding facilities, there are increasing concerns about lions being severely neglected. At Facility A, lions were reportedly fed only once a month, with no one taking care of the lions full-time. The enclosures were "not cleaned for a considerable time" at facility B. The lions were only fed once every three weeks, and old carcasses, chicken feathers and faeces were scattered throughout the enclosures. A male lion was visibly very thin due to a lack of food, and there were reports of three female lions attacking and eating another lion at the facility.

Sources revealed that some lions transported from breeding farms to hunting farms were being drugged and released before the minimal provincial release time, which violates established legal standards. Anonymous sources provided further information on a third Facility C, raising concerns including malnutrition, lack of fresh and clean drinking water, filthy enclosures with inadequate fencing, minimal veterinary treatment, lack of enrichment or shelter, and poor husbandry practices.

Inhumane practices in commercial captive lion breeding facilities*



^{*}The conditions in commercial captive lion breeding facilities in South Africa have been a concern for the past two decades.



Photo: Juvenile lions and tigers kept together at a publicly accessible commercial captive breeding facility in South Africa. There are concerns that the legal captive breeding and canned hunting of lions and tigers is a detrimental conduit for the illegal international big cat bone trade. A large number of the lions and tigers are exported to renowned hotspots for demand in big cat body parts and the illegal wildlife trade. Image for illustrative purposes captured in public access captive lion facilities. Images from closed-access facilities mentioned in this report have been withheld to protect source identity. Credit: World Animal Protection / Roberto Vieto

Big cats and other wildlife species

The current situation also affects other big cat species, which may be kept in the same substandard conditions and could be used in place of lions to fuel the international big cat bone trade. The exact number of big cat species on lion farms is unknown, as the industry has never been fully audited. However, according to freedom-ofinformation requests, around 275 predator facilities were issued with captivity permits for Threatened or Protected Species (TOPS) in Mpumalanga, Free State, North West, and Gauteng alone, keeping at least 5,508 lions, 496 cheetahs, 382 tigers, 198 leopards, 37 pumas, and 27 jaguars in any one year between 2017 and 2020¹⁰ (Figure 1). Information from sources and direct observations at public facilities shows the number of South

American jaguars and African and Indian leopards is snowballing at lion facilities. Tiger, lion, and leopard skeletal parts (including bones, teeth, and claws) are known to be traded in Southeast Asia and China for medicinal purposes. Lion bones are either sold as products in their own right or substituted for tiger bones²⁷ to deceive consumers, who prefer tiger bone wine to lion bone wine²⁸. Tiger bones are also sold as lion bones to deceive law enforcement²⁸. It is difficult to know whether a product contains tiger, lion, or other big cat materials. This difficulty increases the risk posed by having other big cats on farms in South Africa when their bones could be used as substitutes for lion bones.

There are concerns that South Africa's legal captive-bred tiger industry is contributing to illegal international trade, and this may also be happening with other big cat species on farms. Many tigers are exported from farms in South Africa to countries with a high demand for their body parts. Some farm owners are switching to breeding tigers and liger hybrids (offspring of a male lion and a female tiger) as a response to the impeding ban on lion farming. This may be an attempt to meet the demand for big cat bones. There are also concerns that the legal trade could

threaten wild lions in Africa by leading to increased poaching²⁹. According to information from confidential sources in South Africa, poachers are also targeting captive breeding facilities for tigers²⁵. This has happened more frequently over the past four years, resulting in the death of more than 60 animals in five facilities⁷. Poachers usually use poisoned chicken to kill the animals, and they often only take the heads and paws to sell their teeth and claws to Asian consumers⁷.

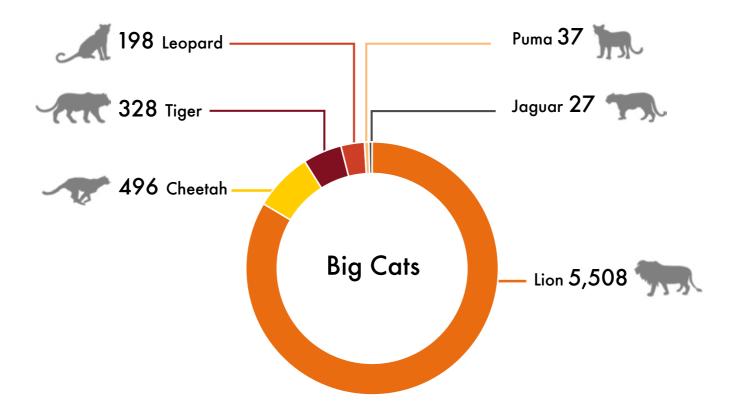


Figure 1. This chart shows the diversity and number of big cat species kept on registered lion farms in South Africa. The data was obtained from Promotion of Access to Information Act (PAIA) requests and includes information on the number of individuals kept in Mpumalanga, Free State, North West, and Gauteng in any one year between 2017 to 2020. The number of individuals may be underestimated as, where this information was missing for a facility, we recorded it as 110.

Our research into commercial lion farms in South Africa has revealed that a much wider variety of animals are present than previously thought. Provincial authorities provided us with data showing that at least 906 carnivores and omnivores, including nine species of felids and canids, were kept at registered private facilities between 2017 and 2020 (see Appendix 1, Table 1). For example, we found at least 235 caracals, 230 servals, 82 African wild cats, and 36 Black-footed cats, among other species (see Figure 2). In addition, 27 other types of animals were found in these facilities, including hyenas, meerkats, primates, Asian black bears, civets, genets, and hippos (see Appendix, Table 1). This data only scratches the surface in terms of the actual number of species on these farms. The number of individuals of each

species is probably much higher than reported; the data received often only included the species' name, not the number of animals.

As part of our research, we also conducted visits to nine public facilities around Pretoria and Johannesburg in 2022 where we found species not in the data provided via freedom-of-information requestions, like lynx and Canadian timber wolves (see Appendix, Table 2). The diversity of wild animals - including some threatened species - kept in suboptimal conditions and in close contact with humans raises additional concerns about animal welfare, public health and conservation, and could further harm South Africa's reputation.

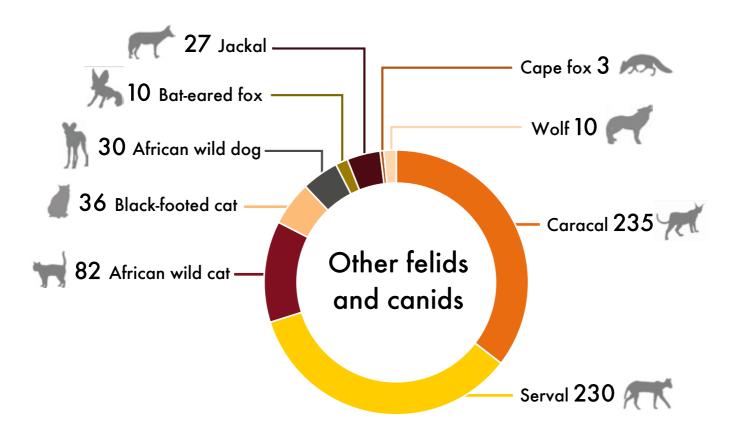


Figure 2. Summary of the types and the maximum number of additional felid and canid species kept on registered lion farms in four provinces of South Africa between 2017 and 2020. Data source: Promotion of Access to Information Act (PAIA) requests. Note: The number of individuals may be underestimated as where this information was missing for a facility, we recorded it as 1. Appendix 1, Table 1 provides a complete list of species. One species, the African wild dog, is Endangered according to the IUCN Red List of Threatened Species, two are Near Threatened (jaguar and brown hyena), and three are Vulnerable (black-footed cat, Asian black bear, hippopotamus). Thirteen are listed in CITES Appendices, including four on Appendix I (black-footed cat, jaguar, Asian black bear, Nile crocodile), meaning that international commercial trade is only allowed in exceptional circumstances.

Why a mandatory phase-out?

Voluntary phase-out options should only be the first step towards a mandatory end of the captive lion breeding industry in South Africa. Shutting down commercial captive lion breeding is the only way to solve the severe problems in the industry. This is in line with the conclusions of the HLP report (2020):

- The commercial captive lion industry threatens South Africa's reputation with associated political and economic
- The commercial captive lion industry threatens South Africa's reputation as a leader in the conservation of wildlife and as a country and destination with iconic wild lions.
- The commercial captive breeding of lions is culturally dispossessing of the spiritual value of lions to communities and cultures in South Africa.
- The commercial captive breeding of lions poses major concerns over work conditions and safety of workers and tourists, and zoonotic disease risks.
- The commercial captive breeding of lions does not contribute meaningfully to the conservation of wild lions.
- The commercial captive breeding of lions creates major welfare contraventions in the industry in general.

The South African government's apparent wavering resolve on this issue - of switching the phase-out of commercial captive lion breeding to voluntary - has raised some serious concerns. Research shows that companies typically only adopt voluntary schemes to improve their reputation and revenue³⁰. Therefore, it is unlikely that lion farm owners would shut down their businesses unless it ultimately benefits their position, for example, by helping their reputation as early adopters of the phase-out.

A clear and decisive path to change

Instead of taking full responsibility for the issue, the government risks shifting the burden onto the lion farm owners, potentially putting short-term economic benefits ahead of addressing the fundamental problems within the industry. This approach could

send mixed messages to stakeholders including lion farm owners and customers about the severity of the situation, as highlighted in the HLP report. Voluntary participation in the phase-out could also increase the risk of illegal activity during the transition and could make it easier for the industry to revert to current harmful practices later down the line. The government must take a strong stance and lead the industry towards a responsible and permanent end to commercial captive lion breeding with a clear and decisive plan.

Transparency and clear direction are essential when it comes to ending controversial industries like commercial captive lion breeding. Informed decision-making is key, and industry actors must know the exact timeframe and process for halting the industry. South Korea's experience in phasing out bear bile farming is a good example. During the initial voluntary phase, a proposed bill included a number of provisions such as a sterilisation programme for farmed bears, and compensation for farm owners. The bill also included bans on breeding, using bears for display, and transferring bears between farms. This clear direction from the government allowed stakeholders to work on solutions, such as alternative ways to make money and compensation plans that benefit everyone. Such transparency and guidance will be essential for a successful and responsible end to captive lion breeding.

Moreover, it is important to note that previous studies suggest that voluntary approaches work better when there is a backup plan for regulation if voluntary goals don't work³¹. If it's not made clear that the industry will be phased out in a specific timeframe, it could cause problems with industry stakeholders and potential litigation. It could also lead to a longer transition time and more resources needed for the process. This was seen in initial negotiations with bear farmers in South Korea, where compensation demands kept increasing until the final policy was implemented.

It is not enough to ask commercial lion breeders to voluntarily stop breeding if we are to achieve the goals set out in the HLP report (2020). A voluntary phase-out should be the first of many steps, and the financial environment that makes the industry profitable should be altered to discourage commercial captive lion farming activities.

Next steps and recommendations

There must be a roadmap to effectively plan and manage the complete phase-out of commercial captive lion breeding in South Africa. This roadmap should have clear accountability, communication, and timelines for the phase-out strategy.

If those working in the industry are given voluntary options for phase-out in the first instance, the ultimate goal of ending lion

farming nationwide must still be communicated clearly and transparently. All stakeholders involved in the industry should receive clear communication on the timeline, including an ultimate end date and compulsory pathways for stopping all activity related to commercial captive lion breeding.

Phase 1

We suggest several steps to begin the responsible mandatory exit from the current industry. The immediate priorities should be:

- Stop breeding lions and other large felids in commercial facilities nationwide. Options such as separating males from females, castration, and sterilisation should be evaluated to establish appropriate breeding control measures considering risks, welfare implications, costs, and practicalities.
- Stop issuing Threatened or Protected Species (TOPS) permits to new entrants into the industry nationwide.
- Stop issuing CITES export permits for hunting trophies, bones, teeth, claws, other body parts, derivatives, and live big cats.
- Ensure clarity on managing and disposing of lion bone stockpiles to prevent illegal trade in lion and other big cat parts and derivatives.
- Prohibit 'hands-on' interactive tourism activities per the HLP report's recommendations.

These steps would make it harder for commercial captive lion breeders to continue their activity and encourage more of them to end any cruel and illicit activities.

Phase 2

At the same time, research should be conducted to find new sources of income that could support the time-bound mandatory phase-out of the industry. Research is needed on how to support the following actions:

- Set up well-funded sanctuaries to take care of the captive animals properly. Costs should cover animal relocation, housing, feeding, staff, and veterinary care.
- Train EMI (Environmental Management Inspectorate) staff to effectively monitor facilities and animals during the phase-out.
- Provide sustainable livelihood training for people who directly or indirectly rely on commercial lion breeding for income, especially farm workers in rural regions.

Phase 3

Once the initial priorities have been accomplished, such as setting up a timeline and securing income sources, the following steps should be taken:

- Conduct a transparent national audit of all facilities, using a standardised scorecard to assess their welfare standards and disease risks.
- Update microchipping for all lions at facilities to help with monitoring during the phase-out and reduce the opportunity for illegal activity.
- Set up ongoing monitoring and review of facilities through an independent body to check they are complying with the transition rules.
- Establish a clear management plan for the surrender or confiscation of healthy animals into properly managed, wellfunded sanctuaries. These should be facilities that can give the animals a permanent captive home, and which only rescue animals, do not buy, sell, loan, or exchange animals in their care, do not breed, and only allow human interaction for veterinary care.
- Implement a full health and maintenance programme, including parasite control, disease scanning, health checks and vaccinations, and increase security to prevent escapes and stop poachers from targeting facilities.
- Establish expert-led criteria for the humane euthanasia of weakened, elderly, or genetically-compromised animals.
- Establish a plan to properly dispose of carcasses to prevent their stockpiling and stop their sale.
- Establish then publicly communicate management protocols for biosecurity and health and safety.
- Establish a strategy to publicly communicate the industry's background and why it must end.
- Create cohesive new legislation and the resources to enforce it, using fines and other penalties to deter people from breaking the rules.

Facilities that are 'off grid' may not follow voluntary schemes and could pose serious risks to lion welfare and public health. As such, the time-bound compulsory phase-out of the captive lion breeding industry is the most thorough solution. Given other wildlife are also housed on lion farms, there are further concerns regarding animal welfare, public health, conservation, and South Africa's reputation. Therefore, we recommend that the Minister of DFFE establish a full understanding of the situation of those species being kept on lion farms across South Africa.

We also suggest that the compulsory end to commercial captive lion breeding should extend to all big cats and other carnivores at a minimum. Doing so would address the welfare, public health, conservation, and legality issues associated with the wildlife farming industry.

Photo: Obese adult female 'white' lion kept in an outdoor enclosure in South Africa. These lions are exploited as entertainment attractions for tourists. Image for illustrative purposes captured in public access captive lion facilities. Images from closed-access facilities mentioned in this report have been withheld to protect source identity. Credit: World Animal Protection / Roberto Vieto





Photo: Adult male lion with a skin lesion at a publicly accessible commercial captive breeding facility in South Africa. At these facilities, lions often live in filthy, overcrowded enclosures and in substandard conditions that fail to meet their basic hygiene, diet, and veterinary needs. Image for illustrative purposes captured in public access facility. Images from closed-access facilities mentioned in this report have been withheld to protect source identity. Credit: World Animal Protection / Roberto Vieto

Conclusion

The negative impacts of South Africa's commercial captive lion industry are clear, but cruel and illicit practices continue. While the government may believe that a voluntary exit strategy could be the answer, we argue that it may only prioritise short-term economic gain over addressing serious issues like animal welfare, public health risks, and illicit behaviour. The industry's problems run deep, and it's time for the government to take action on its

public commitments. We urge the Minister of DFFE to make good on the initial decision to bring a mandatory time-bound end to commercial captive lion breeding in South Africa. By doing so, the government could end the legal trade of lions and their body parts, making detecting and controlling illegal and unethical trade activities easier. Only then can South Africa's reputation be restored and the welfare of the country's captive lions protected.

Appendix I

Table 1. Summary of the species kept on registered lion farms in Mpumalanga, Free State, North West, and Gauteng between 2017 and 2020. It shows the species name, IUCN Red List status, CITES status, and the maximum number kept in registered facilities in any one year between 2017 and 2020. Data source: PAIA information requests 10. Note: The number of individuals is likely to be an underestimate because, where this information was missing for a facility, we recorded it as 1.

Species	Scientific name	IUCN	CITES	Number of individuals
Caracal	Caracal caracal	LC	I/II	235
Serval	Leptailurus serval	LC		230
African wild cat	Felis lybica	LC		82
Meercat	Suricata suricatta	LC	NL	56
Puma	Puma concolor	LC	1/11	37
Black-footed cat	Felis nigripes	VU	l	36
Spotted hyena	Crocuta crocuta	lC	NL	34
African wild dog	Lycaon pictus	EN	NL	30
Jaguar	Panthera onca	NT	l	27
Black-backed jackal	Canis mesomelas	LC	NL	18
Hyena	Hyaenidae	-	-	18
Vervet monkey	Chlorocebus pygerythrus	LC		18
Bat-eared fox	Otocyon megalotis	LC	NL	10
Jackal	Canis sp.	-	-	9
Genet	Genetta sp.	-	-	6
Mongoose	Herpestes sp.	-	-	6
Baboon	Papio sp.	-	-	5
Coati	Procyonidae	-	-	5
European wolf	Canis lupus	LC		5
Porcupine	Hystrix sp.	-	-	5
Marmoset	Callitrichidae	-	-	4
Small spotted genet	Genetta genetta	LC	NL	4
Cape fox	Vulpes chama	LC	NL	3
Aardwolf	Proteles cristata	LC	III	2
Brown hyena	Parahyaena brunnea	NT	NL	2
Bushbaby	Galagidae	-	-	2
Crocodile	Crocodylus niloticus	LC	I/II	2
Rock hyrax	Procavia capensis	LC	NL	2
Hedgehog	Erinaceinae	-	-	2
Primate	Primate	-	-	2
Wolf	Canis sp.	-	-	2
Asian black bear	Ursus thibetanus	VU	l]
Badger	Mustelidae	-	-]
Cape genet	Genetta tigrina	LC	NL]
Civet	Civettictis civetta	LC	III	1
Нірро	Hippopotamus amphibius	VU]
Racoon	Procyonidae	-	-]
Squirrel	Sciuridae	-	-]

Table 2. Species and the number of individuals observed during visits to nine registered lion facilities in and around Pretoria and Johannesburg in 2022. Data source: World Animal Protection, unpublished report.

Lion 72 Moles and females including heavily pregnant females White Bongal tiger 23 Males and females White Bengal tiger 21 Males and females Sherian tiger 9 Moles and females White tiger 12 Strawberry tiger 7 Males and females Uiger 6 Moles and females Wild dogs 45 45 Hyena 15 44 Hyena 15 44 Black leopard 1 44 Black leopard 8 Males and females Dwaf leopard 4 Males and females Black leopard 4 Males and females Black leopard 4 Males and females Black leopard 2 Males and females Black leopard 3 4 Black leopard 3 4 Black leopard 3 4 Lymx 6 Academic Conadian timber wolf 3 4	Species	Number of individuals	Notes	
White Bengal tiger 23 Males and females Bengal tiger 71 Males and females Siberian tiger 9 Males and females White tiger 12 Strowberry tiger 7 Males and females Uger 0 Males and females Males and females Wild alogs 45 Hyeno 15 Leopard 14 Males and females Indian leopard 1 Indian leopard Indian leopard 4 Males and females Dowaf leopard 4 Males and females Black leopard 4 Males and females Black logour 10 Indian leopard Black logour 10 Indian leopard Cheetach 23 Indian leopard Black logour 10 Indian leopard Cheetach 23 Indian leopard Lyrix 6 Aardwolf 3 Lyrix 6 Aardwolf 3 Ion cubs 1 Indian leopard	Lion	72	Males and females, including heavily pregnant females	
Bengal tiger 71 Males and females Siberian tiger 9 Males and females White tiger 12 Strowberry tiger 7 Males and females Uiger 6 Moles and females Wild dogs 45 Hylena Hylena 15 Leopard Indian leopard 1 Males and females Indian leopard 1 Males and females Dowal leopard 4 Males and females Dowal leopard 4 Males and females Black leopard 10 Males and females Black leopard 10 Males and females Black leopard 1 Males and females Black leopard 10 Males and females Black leopard 23 Puma Cheetoh 23 Puma Lynx 6 Aardwolf Arardwolf 3 Ion cubs White liger cubs 3 Ion cubs White liger cubs 3 Ion cubs <td>White lion</td> <td>42</td> <td colspan="2">Males and females</td>	White lion	42	Males and females	
Siberian liger 9 Males and females White liger 12 Strowberry liger 7 Males and females Liger 6 Males and females Wild alogs 45 Hyeno Hyeno 15 Leopard Leopard 14 Males and females Indian leopard 1 Holes and females Black leopard 8 Males and females, including pregnant females Dwarf leopard 4 Males and females Black jaguar 10 Males and females Black jaguar 10 Males and females Puma 5 Secondate females Lon cobs 3 Secondate females Lynx 6 Aardwalf 3 Light price wolf 3 Secondate females White line cubs 4 Secondate females White line cubs 2 Secondate females Leopard cubs 3 Secondate females Silverian liger cubs 4 Secondate females	White Bengal tiger	23	Males and females	
White liger 12 Strawberry liger 7 Males and females liger 6 Males and females Wild dogs 45 Hyena 15 Leopard 14 Moles and females Indian leopard 1 Black leopard 8 Males and females, including pregnant females Dwarf leopard 4 Males and females Jaguar 12 Males and females Black leopard 10 Males and females Block joguar 10 Cheetal 23 Puma 5 Secondary females Lonadian limber wolf 3 Secondary females Lynx 6 Aardwolf 3 Lion cubs 10 White lion cubs 4 Males and females White liger cubs 2 2 Eleopard cubs 3 3 Black joguar cubs 2 3 Black joguar cubs 1 4 White Bengal liger cubs 4	Bengal tiger	71	Males and females	
Strawberry tiger 7 Moles and females Uiger 6 Moles and females Wild dags 45 Hyena 15 Leopard 14 Males and females Indian leopard 1 Black leopard 8 Males and females, including pregnant females Dwaf leopard 4 Moles and females Jaguar 12 Moles and females Black jaguar 10 Cheetah Cheetah 23 Female Puma 5 Female Canadian timber wolf 3 Female Ibon cubs 10 Female White lion cubs 4 Female White liger cubs 2 Female Sierian tiger cubs 3 Female Sierian tiger cubs 1 Female White Bengal tiger cubs 4 Female Bengal tiger cubs 1 Female	Siberian tiger	9	Males and females	
liger 6 Moles and females Wild dags 45 Hyena 15 Leopard 14 Males and females Indian leopard 1 Black leopard 8 Males and females, including pregnant females Dwaf leopard 4 Males and females Jaguar 12 Males and females Black jaguar 10 Total conciliance Cheetah 23 Total conciliance Puma 5 Total conciliance Canadian timber wolf 3 Total conciliance Liynx 6 Total conciliance Aardwolf 3 Total conciliance White lon cubs 4 Total conciliance White liger cubs 2 Total conciliance Siberian tiger cubs 3 Total conciliance Siberian tiger cubs 3 Total conciliance Sirawberry tiger cub 1 Total conciliance Bengal tiger cubs 10 Total conciliance	White tiger	12		
Wild dogs 45 Hyena 15 Leopard 14 Moles and females Indian leopard 1 Black leopard 8 Moles and females, including pregnant females Dwarf leopard 4 Moles and females Jaguar 12 Moles and females Black jaguar 10 Females Cheetath 23 Females Puma 5 Females Conadian timber wolf 3 Females Lynx 6 Females Aardwolf 3 Females White lion cubs 4 Females White liger cubs 2 Females Siberian liger cubs 3 Females Black jaguar cubs 2 Females Strawberry liger cub 1 Females Black jaguar cubs 4 Females Bengal tiger cubs 10 Females	Strawberry tiger	7	Males and females	
Hyena 15 Leopard 14 Males and females Indian leopard 1 Black leopard 8 Males and females, including pregnant females Dwarf leopard 4 Males and females Jaguar 12 Males and females Black jaguar 10 Cheetah 23 Puma 5 Canadian timber wolf 3 Lynx 6 Aardwolf 3 Lynx 6 Aardwolf 3 Lion cubs 10 White lion cubs 4 White liger cubs 2 Leopard cubs 3 Siberian liger cubs 3 Siberian liger cubs 2 Strawberry liger cub 1 White Bengal tiger cubs 4 White Bengal tiger cubs 4 Bengal tiger cubs 10	Liger	6	Males and females	
Leopard 14 Males and females Indion leopard 1 Black leopard 8 Males and females, including pregnant females Dwarf leopard 4 Males and females Jaguar 12 Males and females Black jaguar 10 Cheetah Cheetah 23 Females Puma 5 Females Canadian timber wolf 3 Females Lynx 6 Females Aardwolf 3 Females Uion cubs 10 Females White liger cubs 2 Females Ieopard cubs 3 Females Siberian tiger cubs 3 Females Black jaguar cubs 2 Females Strawberry tiger cub 1 Females Bengal tiger cubs 10 Females	Wild dogs	45		
Indian leopard 1 Black leopard 8 Males and females, including pregnant females Dwarf leopard 4 Males and females Jaguar 12 Males and females Black jaguar 10 Cheetah 23 Puma 5 Canadian timber wolf 3 Lynx 6 Aardwolf 3 Lion cubs 10 White lion cubs 4 White lion cubs 4 White lieger cubs 2 Leopard cubs 3 Siberian tiger cubs 3 Siberian tiger cubs 2 Strawberry tiger cub 1 White Bengal tiger cubs 4 White Bengal tiger cubs 4 Bengal tiger cubs 10	Hyena	15		
Black leopard 8 Males and females, including pregnant females Dwarf leopard 4 Males and females Jaguar 12 Males and females Black jaguar 10 Cheetah 23 Puma 5 Canadian timber wolf 3 Lynx 6 Aardwolf 3 Lion cubs 10 White lion cubs 4 White liger cubs 2 Leopard cubs 3 Siberian tiger cubs 2 Strawberry tiger cub 1 White Bengal tiger cubs 4 Bengal tiger cubs 10	Leopard	14	Males and females	
Dwarf leopard 4 Males and females Jaguar 12 Males and females Black jaguar 10	Indian leopard	1		
Jaguar 12 Males and females Black jaguar 10 Cheetah 23 Puma 5 Canadian timber wolf 3 Lynx 6 Aardwolf 3 Lion cubs 10 White lion cubs 4 White tiger cubs 2 Leopard cubs 3 Siberian tiger cubs 2 Strawberry tiger cub 1 White Bengal tiger cubs 4 Bengal tiger cubs 10	Black leopard	8	Males and females, including pregnant females	
Black jaguar 10 Cheetah 23 Puma 5 Canadian timber wolf 3 Lynx 6 Aardwolf 3 Lion cubs 10 White lion cubs 4 White tiger cubs 2 Leopard cubs 3 Siberian tiger cubs 3 Black jaguar cubs 2 Strawberry tiger cub 1 White Bengal tiger cubs 4 Bengal tiger cubs 10	Dwarf leopard	4	Males and females	
Cheetah 23 Puma 5 Canadian timber wolf 3 Lynx 6 Aardwolf 3 Lion cubs 10 White lion cubs 4 White tiger cubs 2 Leopard cubs 3 Siberian tiger cubs 3 Black jaguar cubs 2 Strawberry tiger cub 1 White Bengal tiger cubs 4 Bengal tiger cubs 10	Jaguar	12	Males and females	
Puma 5 Canadian timber wolf 3 Lynx 6 Aardwolf 3 Lion cubs 10 White lion cubs 4 White tiger cubs 2 Leopard cubs 3 Siberian tiger cubs 3 Black jaguar cubs 2 Strawberry tiger cub 1 White Bengal tiger cubs 4 Bengal tiger cubs 10	Black jaguar	10		
Canadian timber wolf 3 Lynx 6 Aardwolf 3 Lion cubs 10 White lion cubs 4 White tiger cubs 2 Leopard cubs 3 Siberian tiger cubs 3 Black jaguar cubs 2 Strawberry tiger cub 1 White Bengal tiger cubs 4 Bengal tiger cubs 10	Cheetah	23		
Lynx 6 Aardwolf 3 Lion cubs 10 White lion cubs 4 White tiger cubs 2 Leopard cubs 3 Siberian tiger cubs 3 Black jaguar cubs 2 Strawberry tiger cub 1 White Bengal tiger cubs 4 Bengal tiger cubs 10	Puma	5		
Aardwolf 3 Lion cubs 10 White lion cubs 4 White liger cubs 2 Leopard cubs 3 Siberian tiger cubs 3 Black jaguar cubs 2 Strawberry tiger cub 1 White Bengal tiger cubs 4 Bengal tiger cubs 10	Canadian timber wolf	3		
Lion cubs10White lion cubs4White tiger cubs2Leopard cubs3Siberian tiger cubs3Black jaguar cubs2Strawberry tiger cub1White Bengal tiger cubs4Bengal tiger cubs10	Lynx	6		
White lion cubs4White tiger cubs2Leopard cubs3Siberian tiger cubs3Black jaguar cubs2Strawberry tiger cub1White Bengal tiger cubs4Bengal tiger cubs10	Aardwolf	3		
White tiger cubs2Leopard cubs3Siberian tiger cubs3Black jaguar cubs2Strawberry tiger cub1White Bengal tiger cubs4Bengal tiger cubs10	lion cubs	10		
Leopard cubs3Siberian tiger cubs3Black jaguar cubs2Strawberry tiger cub1White Bengal tiger cubs4Bengal tiger cubs10	White lion cubs	4		
Siberian tiger cubs3Black jaguar cubs2Strawberry tiger cub1White Bengal tiger cubs4Bengal tiger cubs10	White tiger cubs	2		
Black jaguar cubs 2 Strawberry tiger cub 1 White Bengal tiger cubs 4 Bengal tiger cubs 10	Leopard cubs	3		
Strawberry tiger cub 1 White Bengal tiger cubs 4 Bengal tiger cubs 10	Siberian tiger cubs	3		
White Bengal tiger cubs4Bengal tiger cubs10	Black jaguar cubs	2		
Bengal tiger cubs 10	Strawberry tiger cub	1		
	White Bengal tiger cubs	4		
Black leopard cubs 5	Bengal tiger cubs	10		
	Black leopard cubs	5		

References

- Conservation Action Trust. Answer to South African Parliamentary Question: Noting there are approximately 7979 lions in captivity in 366 facilities. https://www.conservationaction.co.za/answer-to-south-african-parlimentary-question-noting-there-are-approximately-7979-lions-in-captivity-in-366-facilities/
- 2. Heinrich, S. et al. The extent and nature of the commercial captive lion industry in the Free State province, South Africa. Nat. Conserv. 50, 203-225 (2022).
- Sharife, K. Inside South Africa's Brutal Lion Bone Trade. OCCRP https://www.occrp.org/en/investigations/inside-south-africas-brutal-lion-bone-trade (2022).
- Mthethwa, C. Fur crying out loud: Man en route to Vietnam with lion bones in luggage arrested at OR Tambo airport. news24 (2023).
- Pinnock, D. Unwanted lions: Vietnam sting operation suggests slaughter of farmed lions in South Africa is under way. Daily Maverick (2021).
- Pyatt, J. Lions are pictured in tiny cages waiting to be slaughtered for use in Chinese medicine: 27 animals' skeletal remains are discovered in South African police raid. Mail Online (2021).
- 7. World Animal Protection. Unpublished report.
- 8. Williams, V., Newton, D., Loveridge, A. & MacDonald, D. Bones of contention: An assessment of the South African trade in African Lion Panthera leo bones and other body parts. TRAFFIC Camb. UK WildCRU Oxf. UK (2015).
- Four Paws. Year Of The Tiger? Big cat farming in South Africa: the need for international action. FOUR PAWS Anim. Welf. Found. (2022).
- 10. de Waal, L., Jakins, C., Klarmann, S. E., Green, J. & D'Cruze, N. The unregulated nature of the commercial captive predator industry in South Africa: Insights gained using the PAIA process. Nat. Conserv. 50, 227-264 (2022).
- 11. Fobar, R. Exclusive: Inside a controversial South African lion farm. National Geographic (2019).
- 12. Green, J. et al. Welfare concerns associated with captive lions (Panthera leo) and the implications for commercial lion farms in South Africa. Anim. Welf. 31, 209-218 (2022).
- 13. Green, J. et al. African Lions and Zoonotic Diseases: Implications for Commercial Lion Farms in South Africa. Animals 10, 1692 (2020).
- 14. Katz, B. 108 Neglected Lions Found on South African Breeding Farm. https://www.smithsonianmag.com/smart-news/108-neglected-lions-found-south-africanbreeding-farm-180972146/(2019).
- 15. Olatunji-Akioye, A. O., Omobowale, O. T., Olaifa, A. K. & Abiola, J. O. Tail docking in an african lion (panthera leo). Isr. J. Vet. Med. 65, 75-76 (2010).
- 16. NSPCA. Overview of Inspection to Lion Breeding Farms by the National Wildlife Protection Unit Inspectorate during the Period March 2016-June 2017. National Society for Prevention of Cruelty to Animals (NSPCA): Alberton, South Africa (2017).
- 17. Mukarati, N. L., Vassilev, G. D., Tagwireyi, W. M. & Tavengwa, M. Occurrence, Prevalence And Intensity of Internal Parasite Infections of African Lions (Panthera leo) In Enclosures At A Recreation Park In Zimbabwe. J. Zoo Wildl. Med. 44, 686-693 (2013).
- 18. Viljoen, I. M., van Helden, P. D. & Millar, R. P. Mycobacterium bovis infection in the lion (Panthera leo): Current knowledge, conundrums and research challenges. Vet. Microbiol. 177, 252-260 (2015).
- 19. Trinkel, M., Cooper, D., Packer, C. & Slotow, R. Inbreeding Depression Increases Susceptibility To Bovine Tuberculosis In Lions: An Experimental Test Using An Inbred-Outbred Contrast Through Translocation. J. Wildl. Dis. 47, 494-500 (2011).
- 20. Saragusty, J. et al. Comparative Skull Analysis Suggests Species-Specific Captivity-Related Malformation in Lions (Panthera leo). PLoS ONE 9, e94527 (2014).
- 21. Beck, M. A. & Lavander, O. A. Host nutritional status and its effect on a viral pathogen. J Infect Dis 182, S93-S96 (2000).
- 22. Kimman, T., Hoek, M. & de Jong, M. C. M. Assessing and controlling health risks from animal husbandry. NJAS Wagening. J. Life Sci. 66, 7-14 (2013).
- 23. Woo, P. C., Lau, S. K. & Yuen, K. Infectious diseases emerging from Chinese wet-markets: zoonotic origins of severe respiratory viral infections. Curr. Opin. Infect. Dis. 19, 401-407 (2006).
- 24. Wildlife Conservation Society, Commercial Wildlife Farms in Vietnam: A Problem or Solution for Conservation? Wildl. Conserv. Soc. Hanoi Vietnam (2008).
- 25. D'Cruze, N. & Elwin, A. Tigers in South Africa: a farming industry exists often for their body parts. The Conversation (2023).
- 26. Marnewick, K. & De Waal, L. Biting the Hand that Feeds You: Attacks by Captive Carnivores Cause Deaths and Injuries in South Africa. Afr. J. Wildl. Res. 53, (2023).
- 27. Nowell, K. Tiger Farms and Pharmacies. in Tigers of the World 463-475 (Elsevier, 2010). doi:10.1016/B978-0-8155-1570-8.00038-4.
- 28. Coals, P., Moorhouse, T. P., D'Cruze, N. C., Macdonald, D. W. & Loveridge, A. J. Preferences for lion and tiger bone wines amongst the urban public in China and Vietnam. J. Nat. Conserv. 57, 125874 (2020).
- 29. Everatt, K. T., Kokes, R. & Lopez Pereira, C. Evidence of a further emerging threat to lion conservation; targeted poaching for body parts. Biodivers. Conserv. 28, 4099-4114 (2019).
- 30. Schiavi, P. & Solomon, F. Voluntary initiatives in the mining industry: do they work?. Greener Manag. Int. 53, 27-41 (2006).
- 31. 31. Whitney, C. K. et al. Imprecise and weakly assessed: Evaluating voluntary measures for management of marine protected areas. Mar. Policy 69, 92-101 (2016).
- 32. Cairney, P. A 'Multiple Lenses' Approach to Policy Change: The Case of Tobacco Policy in the UK. Br. Polit. 2, 45-68 (2007).

We are World Animal Protection.

We end the needless suffering of animals.

We influence decision makers to put animals on the global agenda.

We help the world see how important animals are to all of us.

We inspire people to change animals' lives for the better.

We move the world to protect animals.

World Animal Protection

5th Floor 222 Grays Inn Road London WC1X 8HB

UK

- +44 (0)20 7239 0500
- ✓ info@worldanimalprotection.org
- W: worldanimalprotection.org
- f/WorldAnimalProtectionInt
- /world_animal_protection
- /MoveTheWorld
- /animalprotection

Copyright © World Animal Protection 07.23