

# **WILDLIFE TRADE BANS** **PAVING THE WAY TO EXTINCTION**



**PHASA**  
Professional Hunters' Association  
of South Africa

**Government Gazette (No 43173) Notice 221 of 2020**

***SUBMISSION TO THE HIGH LEVEL PANEL***

The Professional Hunter's Association of South Africa (PHASA) endorses the vision of former South African President, Mr Nelson Mandela. Mr Mandela understood the pivotal role hunting played in wildlife conservation and the vital need for the socio-economic development of rural people to ensure the conservation of plants and animal species.



In this article (Mandela goes Green) Nelson Mandela emphasised: **“It is important for conservation and rural development to be combined”** and it is **“vital to promote environmental conservation and to devise new methods to protect this country’s fast-dwindling plant and animal species”**. He also accentuated that **“Nature conservationists must take into account the needs of people around the reserves. They need to encourage education programmes about protecting wildlife and always act in co-operation with the local communities.”** (Koch, 1991)

### ABOUT THE COVER

Well-meaning people often fall victim to sensationalistic animal rights syndicates. They are unwittingly duped into funding or supporting racketeering campaigns to ban wildlife trade, without understanding the severity of their actions and the consequential role they play in accelerating the extinction of iconic African species. **If wildlife has no value to people in rural communities, it will be eradicated and substituted with other land use options (livestock or crops) that can allow for the subsistence living of rural people.**

The cover of this document is of a rhino cow called “Big Bertha” that was killed by poachers in the Waterberg region of South Africa on a 1,000ha private game ranch on the 7<sup>th</sup> of April 2012. Her face was hacked and massacred with a machete and her horns were violently removed by poacher to be sold on the illegal black market. The irony of this case is that the very custodian employed to look after Big Bertha was the same person that called and welcomed the poachers onto the property to commit this heinous act. What is even more disheartening is that the landowners had given all their African staff a 25% share in every single animal on the property including all the rhino. So why would a person, a custodian who owns, loves and who’s daily duty it is to protect these majestic creatures allow poachers to slaughter an animal that belongs to him?

After a two-month investigation and confession when asked why he did it. He answered by saying, that he was lied to and despite his portion in the 25% share he would never benefit from the rhino. The sad reality is that under the current legislation and environmental regulations the rhino didn’t really belong to him and he and his family were never really going to see any true financial benefit from risking his life on a daily basis to protect these animals. He thus allowed poachers onto the property to kill a rhino belonging to him for a fee of R10 000, a fee which he never received. The same ranch has a rhino horn stockpile worth anything from R50 000 000 - R100 000 000, meaning the African staff have a commodity on paper worth R10 000 000 – R20 000 000 but yet he was willing to kill the same living rhinos producing the horn for a potential payday of R10 000 (0.1%) because to them rhino have become valueless.



## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

Rhino protection, security, and feed costs to protect and nurture these rhinos cost this specific ranch anything from R50 000 – R65 000 per month. A cost that has become a burden and impossible to continually subsidise. Thus, the sad reality is a once passionate conservation area that was dedicated to conserving these majestic animals is one of the many that have become disheartened and are considering converting to cattle ranching or crop farming. An event that will certainly mean the extinction of rhino from yet another small part of South Africa.

# WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

## Contents

ABOUT THE COVER.....	2
1. TERMS OF REFERENCE.....	7
1.1 BACKGROUND.....	10
1.2 STRATEGIC OBJECTIVES OF THE WILDLIFE ECONOMY LAB 2016.....	11
1.3 UNDERSTANDING THE ENABLING PRINCIPALS THAT DRIVE THE WILDLIFE ECONOMY .....	12
1.4 IMPLEMENTATION OF AN ENABLING REGULATORY / ADMINISTRATIVE STRUCTURE.....	13
1.4.1. GAME OWNERSHIP. ....	13
1.4.2. VALUE OF WILDLIFE.....	14
1.4.3. THE RIGHT TO USE WILDLIFE PROFITABLY WITH HUMANE TREATMENT. ....	14
1.4.4. TRANSFORMATION OF THE WILDLIFE ECONOMY THROUGH TRUST AND RESPECT .....	15
1.4.5. OVER REGULATION .....	15
1.5 THE LAW OF EVOLUTION IS TO ADAPT OR DIE.....	15
2. CHALLENGES FACING CONSERVATION OF ELEPHANT, LION, LEOPARD AND RHINOCEROS IN SOUTH AFRICA .....	17
2.1. GLOBAL POPULATION INCREASE AND REQUIREMENTS .....	17
2.2. WILDLIFE TRADE BANS.....	20
2.3. PUBLIC PERCEPTION - “THE CECIL EFFECT” .....	22
2.4. FUNDING CONSERVATION IN SOUTH AFRICA .....	25
3. PART A: ELEPHANTS.....	27
3.1. KEEPING OF ELEPHANTS IN CAPTIVITY: .....	27
3.2. HUNTING OF ELEPHANTS:.....	27
3.3. POACHING AND WILDLIFE TRAFFICKING: .....	29
3.4. POPULATION MANAGEMENT:.....	29
3.5. TRADE IN ELEPHANT IVORY: .....	32
3.6. IMPACTS AND BENEFITS:.....	33
3.7. HANDLING AND WELL-BEING:.....	33
4. PART B: RHINOCEROS .....	35
4.1. INTRODUCTION.....	35
4.2. THE APPROACH.....	44
4.3. DESIRED OUTCOME .....	45
4.3.1. MAINTAINING VIABLE RHINO POPULATIONS.....	45
4.3.2. VALUE OF RHINO .....	45
4.3.3. GOVERNANCE.....	46
4.3.4. INTEGRATIVE APPROACH .....	47
4.3.5. ENABLING MECHANISMS .....	47
4.3.6. PRE-EMPTING UNWANTED FUTURE OUTCOMES. ....	47
4.4. SUMMARY OF LESSONS LEARNED .....	47
4.5. MANAGEMENT STRATEGY. ....	50
4.5.1. ENFORCEMENT.....	50

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

4.5.2.	COMMUNITY EMPOWERMENT .....	51
4.6.	DEMAND MANAGEMENT: .....	53
4.7.	GOVERNANCE, POLICY AND LEGISLATION .....	55
4.8.	MANAGEMENT OF RHINO .....	56
4.9.	RECOMMENDATIONS FROM PHASA TO THE ADVISORY COMMITTEE (HIGH-LEVEL PANEL) APPOINTED TO REVIEW EXISTING POLICIES, LEGISLATION AND PRACTICES RELATING TO THE MANAGEMENT AND HANDLING, BREEDING, HUNTING AND TRADE OF RHINOCEROS .....	57
5.	PART C: LEOPARDS .....	59
5.1.	STRATEGIC OBJECTIVE.....	60
5.2.	SCIENTIFIC INFORMATION .....	60
5.2.1.	CONVENTION FOR INTERNATIONAL TRADE OF ENDANGERED SPECIES (CITES). 61	
5.2.2.	THE INVALID AND UNNECESSARY 2015 LEOPARD NON-DETRIMENT FINDING (NDF) .....	62
5.3.	SOCIO-ECONOMIC INFORMATION WITH REGARD TO LEOPARD MANAGEMENT AND CONSERVATION IN SOUTH AFRICA. ....	74
5.3.1.	ECONOMIC VALUE OF TROPHY LEOPARD HUNTING IN SOUTH AFRICA.....	75
5.3.2.	ECONOMIC VALUE LOST THROUGH CLOSING TROPHY LEOPARD HUNTING IN SOUTH AFRICA FROM 2016 TO 2020. ....	75
5.3.3.	ECONOMIC COST OF LEOPARD POPULATIONS TO GAME RANCHERS AND RURAL COMMUNITIES IN SOUTH AFRICA .....	76
5.3.4.	ESTIMATED COST OF THE SOUTH AFRICAN LEOPARD MONITORING PROJECT.....	79
5.3.5.	SOCIO-ECONOMIC IMPACT OF A ZERO TROPHY LEOPARD HUNTING QUOTA SINCE 2016 TO POVERTY ALLEVIATION, JOB CREATION AND FOOD SECURITY.....	80
5.3.6.	IMPACT OF A ZERO TROPHY LEOPARD HUNTING ON THE TRADITIONAL, CULTURAL AND CONSTITUTIONAL RIGHTS OF SOUTH AFRICAN PEOPLE.....	81
5.4.	RECOMMENDATIONS FROM PHASA - REVIEW EXISTING POLICIES, LEGISLATION AND PRACTICES RELATING TO THE MANAGEMENT AND HANDLING, BREEDING, HUNTING AND TRADE OF LEOPARD... 82	
5.4.1.	REVIEW EXISTING POLICIES, LEGISLATION .....	82
5.4.2.	THE WAY FORWARD .....	86
6.	PART D: LIONS .....	88
6.1.	OVERVIEW OF THE LION – BIODIVERSITY CONSERVATION STRATEGY.....	91
	LION CONSERVATION LEVY .....	95
6.2.	STRATEGIC OBJECTIVE.....	97
6.2.1.	BIODIVERSITY CONSERVATION .....	98
6.2.2.	RESEARCH.....	102
6.2.3.	ASSIST WITH MANAGEMENT CAPACITY .....	106
6.2.4.	SOCIAL DEVELOPMENT.....	108
6.2.5.	ECONOMIC DEVELOPMENT .....	109
6.3.	BREEDING OF LIONS IN CAPTIVITY .....	110
6.4.	HUNTING OF CAPTIVE BRED LIONS .....	112
6.5.	TRADE IN LION BONES AND LEOPARD SKINS.....	115
6.6.	STOCKPILING.....	116
6.7.	MANAGEMENT OF STOCKPILES.....	116

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

6.8. IMPACT AND BENEFITS.....	116
6.9. HANDLING AND WELL-BEING.....	118
7. DEFINITIONS .....	119
REFERENCES .....	128

### Figures

Figure 1 – World population: Past, Present and Future .....	18
Figure 2 - Captive Lion poaching statistics (June 2016 – July 2018).....	21
Figure 3 – Rhinos poached in South Africa 1990-2018 .....	21
Figure 4 - Cartoon; depicting the financial exploitation by animal rights organisations .....	24
Figure 5 – Human wildlife conflict example of an elephant .....	28
Figure 6 – “Shape of a scandal” – Conservation Tribune headline .....	30
Figure 7 – “Elephant Contraceptives” – Conservation Tribune headline .....	31
Figure 8 – Burning Ivory or rhino horn is not conservation as it is not the wise use of a natural resource. ....	33
Figure 9 – Magqubu Ntombela and Dr Ian Player, both legendary rhino conservationists.....	35
Figure 10 – White rhino cow and calf.....	38
Figure 11 – PHASA supports A POSITIVE NATIONAL RHINO MANAGEMENT and PRODUCTION STRATEGY that is in PARTNERSHIP with COMMUNITIES and the PRIVATE SECTOR. ....	44
Figure 12 – Growth of white and black rhinoceros population in South Africa and Namibia including over a period (shaded in) which trophy hunting has been undertaken (Emslie, et al.,2016). ....	49
Figure 13 – Leopard over a kill.....	79
Figure 14 – LBCS fund generation “Lion Conservation Levy” .....	96
Figure 15 – Heterozygosity of Captive Bred Lions in South Africa .....	104
Figure 16 – “Tamed Lions” such as this cub that is petted MAY NOT BE HUNTED.....	114
Figure 17 – Male lion, a welfare concern? .....	118

## 1. TERMS OF REFERENCE

APPOINTMENT OF THE HIGH-LEVEL PANEL OF EXPERTS FOR THE REVIEW OF POLICIES, LEGISLATION, AND PRACTICES ON MATTERS OF ELEPHANT, LION, LEOPARD AND RHINOCEROS MANAGEMENT, BREEDING, HUNTING, TRADE AND HANDLING.

### FOCUS AREAS FOR THE PANEL OF EXPERTS.

The Professional Hunters Association of South Africa (PHASA) welcomes the opportunity to make this written submission for consideration by the high-level panel of experts and makes the following observation.



# PHASA

Professional Hunters' Association  
of South Africa

It would appear that purpose or **STRATEGIC OBJECTIVE** of this review of policies, legislation and practices on matters of elephant, lion, leopard and rhinoceros management, breeding, hunting, trade and handling has not been clearly identified and understood in the Terms of Reference for the Panel of Experts.



**Wildlife should be positively produced rather than negatively protected” (Leopold, 1933)**

The focus areas for the panel of experts must include the Constitutional, Cultural and Traditional Rights of our Rural Communities and Landholders who carry the total social and economic cost for the conservation of elephant, lion, leopard and rhinoceros outside of protected areas.

Our rural communities and landholders have little influence on wildlife policies and legislation as they are a minority group within South Africa yet are the most important stakeholders in the conservation of elephant, lion, leopard and rhinoceros outside of protected areas

Positive wildlife management and production embraces the sustainable or wise utilization of this valuable renewable natural resource for the benefit of people, that facilitates transformation, job creation, food security and poverty alleviation through growing the wildlife economy by creating wealth from wildlife.

Positive wildlife management and production has a hugely different strategic objective to the preservationist ideology, employed in our protected areas, where sustainable wildlife utilization through responsible hunting, is prohibited and wild animals are negatively protected at the expense of rural people.

**The first order of business for this high-level panel of experts must be to fully understand the importance differences between positive wildlife management and the negative protection of these animals.**

**The human rights of the local communities living adjacent protected areas and the rights of landholders who facilitate wildlife conservation and benefit the wildlife economy through creating wealth from wildlife must be fully recognized and protected.**

PHASA members are professionals in the activities of responsible hunting, wildlife management and adventure tourism that largely take place outside of protected areas. The PHASA focus will therefore be on the policy positions concerning the management of these species outside of protected areas, in order to facilitate the identified strategic objective of growing the wildlife economy.

PHASA fully supports the constitutional, cultural, and traditional rights of South Africans to hunt responsibly and to utilize our natural resources (including all wildlife and wildlife products) wisely and sustainably for the socio-economic and environment benefit of our people.

Responsible Trophy Hunting is one of the most important tools available for positive wildlife management, production and conservation in South Africa.

Practices, regulatory measures and policy positions based on preservationist ideologies have not only alienated African people from our wildlife heritage but have criminalized our human right to responsibly manage and sustainably use our wildlife, for the benefit of our people. The need to transform the over restrictive wildlife regulatory environment, that has huge negative impacts on wildlife conservation, job creation, food security and poverty alleviation was identified during the Wildlife Economy Lab and Operation Pakisa of 2016 yet little or no progress in this regard has been made.

PHASA recommends that the **STRATEGIC OBJECTIVE** of this evaluation and assessment process **is to bring about the reforms required to transform and grow the wildlife economy, where Elephant, Lion, Leopard and Rhinoceros populations are positively managed, produced and optimally utilized for the sustainable conservation of these species and the socio-economic and environmental benefit of all South African people.**

PHASA made the following presentation to the Wildlife Forum Meeting of 9 October 2018 that called for the review of policies, legislation and practices concerning all wildlife. We asked for the establishment of a national task team to transform our existing legal framework, in order to create an enabling environment, that stimulates the biodiversity economy as a matter of urgency.

TOWARDS MEANINGFUL TRANSFORMATION OF THE LEGAL ENVIRONMENT GOVERNING THE WILDLIFE SECTOR IN ORDER TO STIMULATE THE BIODIVERSITY ECONOMY. 14 September 2018.

### 1.1 BACKGROUND

The urgent need for land reform and the creation of an enabling environment that will facilitate economic growth of the wildlife and tourism sector was emphasized by President Ramaphosa in his opening address at the recent Biodiversity Economy Innovation Conference held in Venda, during August 2018.

President Ramaphosa emphasized that the wise and sustainable use, of wildlife, through responsible tourism including hunting, as well as the legal trade of wildlife and wildlife products, is a powerful and legitimate means for transformed land to become economically viable with a reduction of poverty, increased job creation and economic growth in rural areas.

Biological diversity is defined as all forms of life, including plants, habitats, humans, domestic and wild mammals, birds, reptiles, fish, insects and micro-organisms. Rich biological diversity is fundamental to human development and to the well-being of us all.

Biodiversity conservation management starts with soil and water, followed by the habitats and lastly the animals - both domestic and wild.

The Convention on Biological Diversity was developed in 1992 with the following objectives:

- Conservation of biological diversity
- Sustainable use of all its components - including wild and domestic plants and animals
- Fair and equitable sharing of benefits arising from the utilization of these natural resources.

Despite the fact that both domestic and wild animals are equally important components of bio-diversity, the laws concerning the sustainable use of wild and domestic animals are very different and are regulated by the different Government Departments of Environmental Affairs (DEA) and Agriculture (DAFF) for wild and domestic animals respectively.

The laws, rules and regulations applied to the wildlife sector by the Department of Environmental Affairs (DEA) were NOT designed to stimulate economic growth through the sustainable use of renewable natural resources, but to give protection to wild animals found in our State managed parks and game reserves or on open areas where wildlife is classified as belonging to no one.

These protective wildlife laws have been one of the greatest inhibiting factors that has alienated rural African people from utilizing their wildlife heritage sustainably.

The need to transform those existing wildlife laws that are unnecessarily restrictive, in order to stimulate economic development and growth of the wildlife sector outside of protected areas, was therefore one of the most important outcomes of Operation Pakisa, and the Biodiversity Economy Lab that has been endorsed by our President.

### 1.2 STRATEGIC OBJECTIVES OF THE WILDLIFE ECONOMY LAB 2016.

- **Economic growth of the wildlife sector.**
- **Transformation**
- **Sustainability**

The above strategic objectives can become a reality, but we need to learn from history by embracing the successes and eliminating the failures of the past.

Prior to the introduction of the Parks and Wildlife Conservation Act of 1975, wildlife in Zimbabwe had little or no value. Teams of commercial hunters were contracted to wipe out all the wildlife over vast areas of land as they were in competition with the more economically attractive land use option of cattle ranching. Just two of the cattle ranches involved had a combined land area that was greater than Scotland. There was a huge international, public outcry associated with the introduction of the Act of 1975, that effectively gave landholders ownership of wildlife on their land.

The government and our wildlife authorities were accused of being irresponsible by handing over our precious wildlife, or national heritage, to the very disgraceful people who were systematically killing them off and could not be trusted to conserve the wildlife. The naysayers and animal welfare organizations complained loudly and bitterly. Many people claiming to be conservationists, fuelled the public miss-perception that the total destruction of all wildlife outside of parks would result, because these animals were no longer protected by strict state-imposed legislation.

Exactly the opposite occurred as the Act of 1975 gave wildlife real commercial value to landholders, resulting in the greatest quantum leap for the wildlife economy and conservation that was ever experienced in that country's history. Huge areas of land were returned to wildlife with the formation of large wildlife conservancies.

The well-known CAMPFIRE program was initiated, where rural people adjacent to parks could become involved, and benefit from sustainable wildlife utilization, associated with their own sound wildlife management practices. Self-administration, where carefully crafted legislation, gave communities of landholders, the powers to regulate each other through democratic processes was a huge success in Zimbabwe. Unfortunately, the poor

governance of more recent times had disastrous consequences for both the economy and wildlife conservation in that country.

We have experienced a similar pattern of events in South Africa where because of wildlife ownership and its commercial value within fenced areas, we now have roughly three times more wildlife in private ranches than in National Parks. This success story is however under serious threat because of the problems associated with TOPS, NEMBA, CITES and other regulations, that hinder and frustrate not only the wildlife economy but also the conservation of our wildlife heritage, have to date NOT been transformed.

### 1.3 UNDERSTANDING THE ENABLING PRINCIPALS THAT DRIVE THE WILDLIFE ECONOMY

Rural African people are best motivated to conserve wildlife on their land when the sustainable use of this renewable natural resource, gives greater socio-economic rewards than other land use options. Meaningful transformation of our legal system must therefore create an enabling environment that stimulates economic growth of the wildlife sector, for the direct benefit of our rural people who carry the cost of having or living with wildlife.

The following revolutionary principles that transformed wildlife management and conservation for the direct benefit of both people and parks were implemented in Zimbabwe through the “Parks and Wildlife Conservation Act of 1975” and proved to be a phenomenal success.

We don't have to reinvent the wheel - we only need the courage to transform.

- Transformation of the wildlife economy was achieved by boldly entrusting landholders with full ownership of wildlife by declaring them the ‘appropriate management authority’ for wildlife on their land.
- The future of wildlife lies in making it MORE valuable and NOT less valuable to rural people provided ownership rights are first granted to landholders.
- Landholders have the right to use wildlife as profitably as they see fit, provided treatment of animals is humane and welfare concerns are addressed.
- Transformation through partnerships with a vibrant civic society. Role players who are directly involved with wildlife production and management, must take responsibility for transforming their industries with enabling educational and logistical support from relevant government departments.

- Over regulation is a hinderance to conservation and the wildlife economy. The need for efficiency requires the elimination of as many government fees and unnecessary bureaucratic regulations as possible. This allows wildlife to be as competitive as possible with other land use options.

### 1.4 IMPLEMENTATION OF AN ENABLING REGULATORY / ADMINISTRATIVE STRUCTURE

#### 1.4.1. GAME OWNERSHIP.

The most important first step in the development of an enabling legal or regulatory environment that will stimulate economic growth in the wildlife sector is to clarify the question of game ownership on private or communal land, that is enclosed with game fencing and managed primarily for commercial purposes

The South African Revenue Service (SARS) classifies all such game as livestock that is OWNED by the land holder, therefore subject to all the relevant TAX legislation. Game farmers are required to pay tax on the commercial value of the wildlife that is owned, in the same manner as commercial cattle farmers, who are taxed on the commercial value of the cattle that they own.

The Department of Agriculture, Forestry and Fisheries (DAFF) is responsible for the laws and regulations governing the various commercial livestock industries. The right of ownership is real and government permits are not needed to transport, sell, kill or utilize an animal that is owned, provided health and safety requirements are met.

In 2016 DAFF listed 12 game species under the Animal Improvement Act with the Wildlife Produces Association (WPA) recognized as the regulatory authority that is answerable to DAFF.

This initiative was to clarify and remove all doubts, that these animals are indeed owned by the farmer but has created further confusion as the standard operating procedures concerning the practical management of these animals, has not been addressed by the relevant Government Developments.

The Threatened or Protected Species (TOPS) regulations introduced by the Department of Environmental Affairs (DEA) has in effect removed ownership rights of these species from legitimate game farmers. Legal use of TOPS animals is prohibited without complying with the most cumbersome permit requirements and paying for permits which DEA officials have the right to refuse. According to DEA ownership of TOPS animals is therefore not vested with the land holders who have paid for, provide feed, water, land, protect and are

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

taxed on these biological assets. The reality is that game owners who may capture, immobilize, transport or hunt a TOPS animal on their property without the necessary permits, are treated the same as criminals or poachers.

The conflicting legal framework concerning the ownership and legal use of wildlife has a huge negative impact on the wildlife industry and our rural economy.

### **Recommendation from PHASA:**

**Laws, rules and regulations that are designed to provide protection for animals classified as res nullius such as TOPS, are not applicable to game that is managed, classified as livestock, owned by the land holder and subject to tax.**

**Those who carry the cost for the management, production, and conservation of wildlife on their land must have the final say with regard to its responsible and sustainable utilization.**

### 1.4.2. VALUE OF WILDLIFE.

The value of all wildlife will automatically increase for the direct benefit of our rural people and the wildlife economy, once clear and meaningful game ownership rights have been established.

### **Recommendation from PHASA:**

**Allow responsible wildlife ownership and the free market economy to take its course.**

### 1.4.3. THE RIGHT TO USE WILDLIFE PROFITABLY WITH HUMANE TREATMENT.

Once again any commercial business has the right to use the assets owned by it, in a profitable manner. This concept is supported by the fact that the sustainable use of renewable natural resources, including wildlife, for the socio-economic benefit of our people is endorsed in the South African constitution.

Our constitutional right to utilize all renewable natural resources sustainably and for our direct economic benefit on commercially managed land, is often confused with the application of the “precautionary principle” that is referred to in the wildlife preservation strategies of National Parks.

Preservationist ideologies that have alienated African people from their land and the sustainable, legal use of our wildlife, need be eliminated in order to transform and grow the biodiversity economy.

**PHASA fully supports the right of our people to create wealth from the sustainable use of wildlife.**

#### 1.4.4. TRANSFORMATION OF THE WILDLIFE ECONOMY THROUGH TRUST AND RESPECT

Meaningful partnerships or working relationships between the role players of the private sector, our previously disadvantaged individuals, or communities and our Government must be built on TRUST and RESPECT in order to transform our wildlife economy.

The South African wildlife industry is vibrant, well organized and structured, with the full capacity to administer their own affairs at a local level. All that is required is for rural communities, responsible game ranchers, wildlife managers and hunters to be trusted with the authority to apply peer pressure in order to regulate each other through democratic processes and have enabling support from relevant government departments.

**PHASA proposes the formation of wildlife management and conservation authorities to be set up at local level in order to achieve the above.**

#### 1.4.5. OVER REGULATION

Over regulation was identified as a hinderance to conservation and the wildlife economy through the Biodiversity Economy Lab process of 2016. There is an urgent need to eliminate as many government fees and bureaucratic regulations as possible to make wildlife as competitive as possible with other land use options yet little or no progress has been made in this regard.

**PHASA believes that sound biodiversity conservation and socio-economic management principles must take priority over preservationist ideology.**

A national task team should be established, to transform our existing legal framework, in order to create an enabling environment, that stimulates the biodiversity economy as a matter of urgency.

#### 1.5 THE LAW OF EVOLUTION IS TO ADAPT OR DIE.

We believe that our Government Departments, are sincere about transformation and developing the wildlife economy so we need to act efficiently and fast as we are rapidly running out of time.

We cannot allow transformation projects where workers now own 50% of the land and 25% of the wildlife to fail as a direct result of over regulation that is preventing economic development?

We can stop the poaching and senseless slaughter of our wildlife by addressing the cause of this problem. Poachers are converted into Protectors of Wildlife when they have real ownership and can legally benefit from the responsible and sustainable use of this magnificent renewable natural resource known as wildlife.

Our South African people who have invested in wildlife, not only in financial terms but in sweat equity, who feed or provide the required habitat and risk their lives to protect their animals, day and night should be assisted to optimize legal economic benefit from their investment in wildlife.

As South Africans we are the World Leaders in Wildlife Management that has a huge positive impact on wildlife conservation in our country. What is not clearly understood by many well-meaning people is that responsible trophy hunting plays a vital role in wildlife management. It is beneficial not only in optimizing economic returns but more importantly, population growth of the species hunted is stimulated, through the removal of non-breeding individuals, such as old animals and excess males,

In the words of President Ramaphosa we need to transform and grow the Game Ranching estate from the current 20 million hectares of largely white owned farms to 30 million hectares that includes an additional 10 million hectares of land and wildlife that is owned by our black people. This is achieved by staying focused on the Strategic Objective - The Inclusive Growth of Our Wildlife Economy for the Sustainable Benefit of All Our People.

## **WE HAVE THE FREEDOM TO CHOOSE OUR FUTURE**

PHASA is pleased to see the number of well qualified experts on the panel who are extremely capable of affecting the changes required as outlined above, that relate to all wildlife so will not necessarily be repeated under the individual species.

## 2. CHALLENGES FACING CONSERVATION OF ELEPHANT, LION, LEOPARD AND RHINOCEROS IN SOUTH AFRICA

Due to social media and global connectivity, we now live in a world where those who contribute the least have the most to say. As a result, well-meaning urban people are often influenced by emotional rhetoric to take a stance about a rural activity they do not fully comprehend. When it comes to decision making and policy implementation regarding rural conservation, it should be the people who live with consequences of these decision that should have the most to say and be allowed contribute to the decision making. Unfortunately, this is very seldom the case and the rural people who make a sustainable livelihood from wildlife and/or hunting are often disregarded.

The anti-hunting activists have cunningly used legitimate difference of opinions concerning “ethics” and vested commercial interests to create divisions within the hunting industry. The modern media fuels controversial topics by publishing sensational propaganda, rather than the truth, in order to sell their storyline. As stated by the Late Minister of Environmental Affairs *“Peddling half-truths and unsubstantiated claims of widespread canned hunting is damaging our reputation for species conservation.”* & *“The legal, sustainable use of wildlife cannot and should not be equated with illegality such as canned lion hunting”* (Molewa M. E., 2015)

There is a tendency for the media and anti-hunting activists to conflate canned hunting (an illegal activity which is outlawed as a prohibited method of hunting in terms of the Threatened or Protected Species (TOPS) Regulations) with trophy hunting (Simon Stuart, 2016). Regrettably, the current public discourse is awash with heavily slanted and often misrepresented information. This is harmful to government’s ongoing conservation efforts, and also to those of organisations in the wildlife and game industry that are working with us to ensure the survival of lion species in the wild. (Molewa D. E., 2018)

### 2.1. GLOBAL POPULATION INCREASE AND REQUIREMENTS

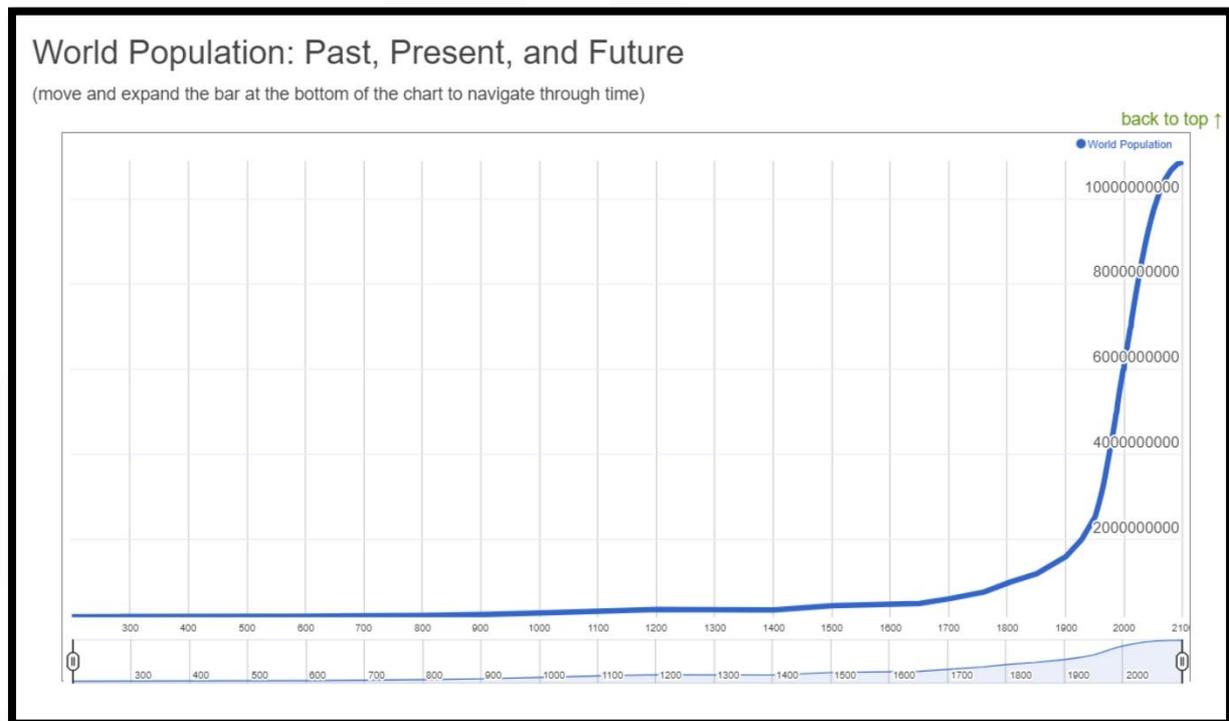
The world’s population has exploded over the last 200 years. The current global population is teetering on 7.8 billion people an **increase of 650%** since 1850 (1.2 Billion). **South Africa is no different and is currently ranked globally as having the 25<sup>th</sup> largest human population in the world with 59.3million people.** With a population density of 49 (person/km<sup>2</sup>) (Worldometer, 2020).

Most of the major threats are interlinked and are as a direct result of Africa’s ever-increasing human population. The whole world laments the fact that during the 20 Century, wildlife and especially wild lion populations all over Africa disappeared at an escalating rate. **The anti-hunter animal rightists studiously quote the figures insinuating**

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

that hunting was the cause. They avoid making mention of the fact, however, that during this same period Africa's human population increased by more than 650 percent. Common sense tells us, therefore, that wildlife populations declined not because of increased hunting but because expanding human populations have permanently occupied more and more of wildlife's vital home-range habitats. (Thomson R, 2018)

Figure 1 – World population: Past, Present and Future



(Worldometer, 2020)

As Africa's human population grows exponentially - from 1.2 billion currently to 2.47 billion in 2050 more land is needed to house people and produce the required food to sustain them. Cultivated land area in sub-Saharan Africa is expected to increase by 21% and livestock by 73% within this same period. As human occupation of African savannas expands, interactions between wildlife and humans become more frequent. Lions are the key example of this. Lion prey species compete with livestock grazing in Protected Areas throughout Africa. Close contact with domestic herds can lead to lions killing livestock, which in turn provokes retaliatory killing of lions by herders and ranchers. Human encroachment also leads to illegal bushmeat hunting, a second severe threat to both lions and their prey. (K Wood, 2016)

UN statistics tell us that in the year 1900 the human population in Africa south of the Sahara Desert was 95.9 million people; that in the year 2000 the figure was 622 million; and

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

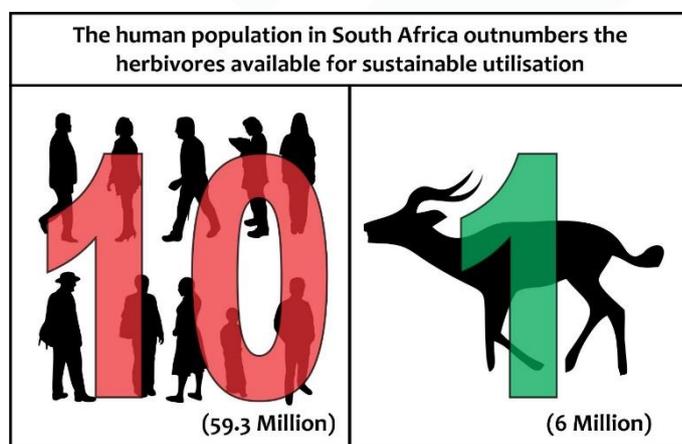
that the prognosis for the end of the current century (2100) is over 4 billion. (Thomson R, 2018)

With the continuing explosion of Africa's human population continuing into the 21 century. We can, therefore, expect wildlife populations to continue to declines in the years ahead. Indeed, by the time 2100 comes along, it is highly unlikely that there will be *any* wild lions or elephants left outside the national parks; and those living inside the national parks will be under ever greater pressure from increasingly large human settlements just outside the park boundaries. The next dominoes to fall will be the national parks themselves. (Thomson R, 2018)

**As habitat loss continues to encroach on remaining wilderness areas, wildlife, particularly large mammal species, will increasingly be restricted to fenced areas, which will necessitate a more detailed discussion about their management (Ripple, 2015) and of what it means to conserve these species so their “wildness” quality is sustained (Redford, 2011) In addition, as subpopulations of wildlife become smaller and more fragmented, increasingly intensive and diverse forms of management will be required. (Hayward MW C. M., 2015)**

The Endangered Wildlife Trust (EWT) in their green economy report estimated that there are 8 979 wildlife ranches in South Africa totalling an area of 170 419 km<sup>2</sup> or about 14% of South Africa's landmass. (Taylor, 2016)

Given a total land area of 1,221,000 km<sup>2</sup> for South Africa, the area covered by commercial wildlife ranchers comprises 14.0% of the country, which is 2.2 times greater than the area covered by South African state protected areas (78,100 km<sup>2</sup>, or 6.4% of the country's surface area; the latter areas include National Parks, Provincial Nature Reserves, Mountain Catchment Areas, Forest Area Protected Areas, Local Nature Reserves, World Heritage Sites and National Botanical Gardens; (SANBI, National Biodiversity Assessment. GIS Metadata: Detailed Report for Protected, Areas,, 2011) (Taylor, 2016).



The green economy report estimates that there are 6 million herbivores on private land. Compared to South Africa's human population this is a 10/1 ratio. Other peer reviewed literature estimates between 16 – 20 million head of game which at best is still a 3/1 ratio. (Taylor, 2016)

### 2.2. WILDLIFE TRADE BANS

Bans on trophy hunting in Tanzania, Kenya and Zambia accelerated loss of wildlife due to removal of incentives for conservation. If similar bans are imposed on South Africa this could lead to the loss of private game farms which cover 3 times the surface area of government conservation areas. This will lead to a reversion to livestock and crops and hence degraded habitats. If well-regulated trophy hunting is permitted this will ensure the survival of wild species. (Oberem, 2016)

The media furore surrounding the Zimbabwean lion Cecil, called for blanket bans or restrictions on trophy hunting. Bans affect both good and bad hunting practices. They are a blunt instrument that risks undermining important benefits for both conservation and local livelihoods, thus exacerbating rather than addressing the prevailing major threats (Simon Stuart, 2016). In 1977, Kenya banned hunting and the subsequent consequences for wildlife outside of national parks was catastrophic.



Shortly after the Cecil controversy the U.S. Fish and Wildlife Service (FWS) listing lions on the Endangers Species Act (ESA). This did not only affect trophy hunting in Zimbabwe but across all the Southern African Development Community (SADC) regions. This had dire consequences for South Africa's rural lion community, with a decrease of over 45% in hunted lion trophies in 2016 a substantial decrease in income generation (DEA, Hunting Statistics, 2018). Since the implementation of the ESA, there has also been a noticeable increase in the poaching of CBL. The Endangered Wildlife Trust (EWT) have compiled statistics referencing open source media reports from June 2016 – July 2018. The EWT indicated that the current trend of lion poaching is strictly restricted to lion living in controlled environments. (Marnewick, 2018)

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

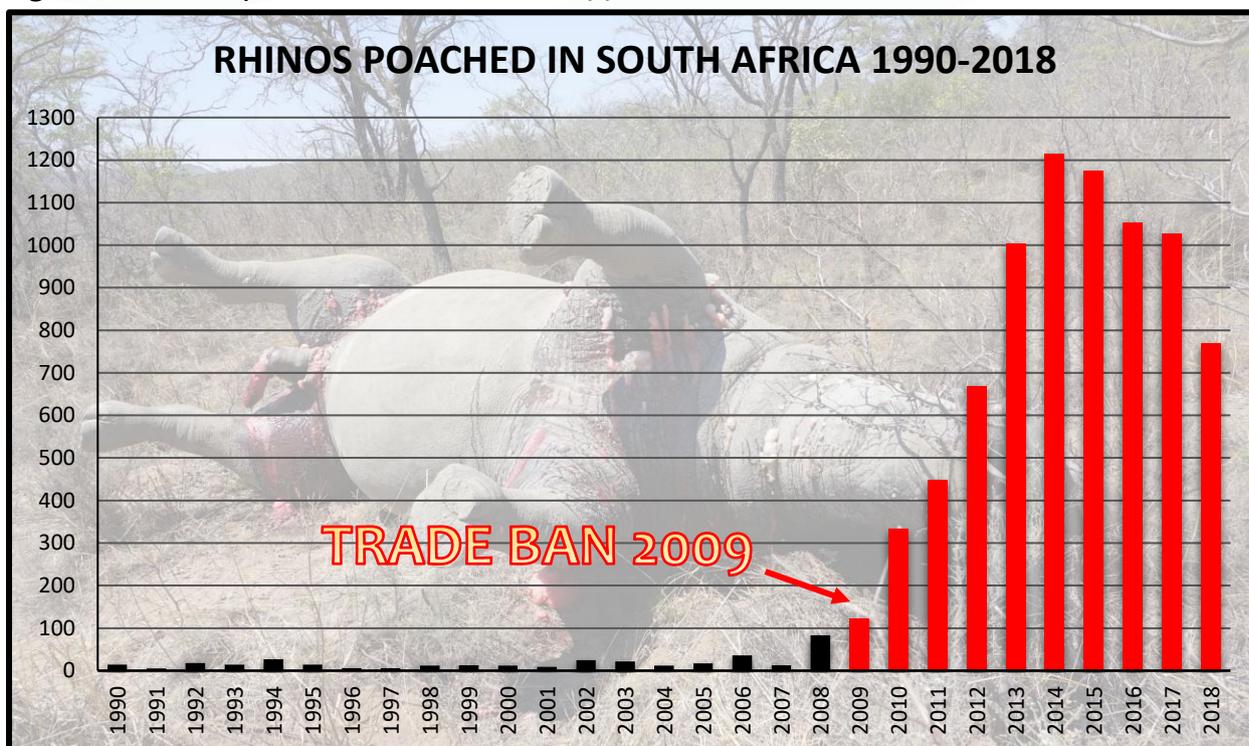
Figure 2 - Captive Lion poaching statistics (June 2016 – July 2018)



(Marnewick, 2018)

Dr Edna Molewa referenced similar occurrence with Rhino. **“Our experience with the illegal trade in rhino horn has shown that poaching operations and illegal trade networks proliferate when there is no legally acquirable supply.”** (Molewa D. E., 2018)

Figure 3 – Rhinos poached in South Africa 1990-2018



Trade bans don't stop the illicit trade, it turns law abiding citizens into criminals and facilitates the extinction process ten-fold as the cost of protecting species becomes insurmountable for local and rural communities.

Trade ban only restricts the flow of legal products and in this case the result will be that ongoing demand will be supplied from illegal sources. In reaching any decisions regarding the hunting or trade of any species, the Department of Environmental Affairs and, ultimately the Minister, has to weigh up the advice from the Scientific Authority against the many trade-offs. The basic principle is to ensure the survival of species in the wild. There is also the need to balance conservation with trade dynamics and other socio-economic considerations. There is no one size fits all in dealing with the challenges, opportunities facing the management of not just lion, but a variety of species. (Molewa D. E., 2018)

If decisions to ban or restrict any form of trophy hunting are taken, there is a need to identify and implement in advance viable alternative long-term sources of livelihood support and conservation incentives. Making the option of trophy hunting unviable through import restrictions lead to local communities losing cash income from hunting concessions on their land, reduced access to meat, and loss of employment (Simon Stuart, 2016)

### 2.3. PUBLIC PERCEPTION - “THE CECIL EFFECT”

**Despite the African lion not facing extinction, or “an unprecedented crisis” from either hunting, captive breeding or the trade in lion bone in South Africa. (Molewa M. E., 2015) & (Scientific Authority, 2018) However, the “perceived public perception” is that they are in crisis.**

Lions, elephant, rhino and leopard are considered to be an “iconic species” and the anti-hunting and anti-sustainable use fraternities have identified these species as an emotional target that can be easily exploited to generate millions of dollars in donations for their organisations. **How many millions of dollars was raised in the in name of a Zimbabwean wild lion called Cecil? Animal rights organisations bank balances increased exponentially as they profited from the slain icon, while the community around Hwange National Park (HNP) in which Cecil lived did not get a fraction of the proceeds.**

Animal rights organisations often misrepresent a one-sided view that in most instances is anything, but the truth. Media sensationalism is founded in creating social media outrage.



To illustrate how the truth can be twisted, the picture of Prince William shows what appears to be him showing a rude gesture to the crowd. However, as shown in the image below he was actually signalling the birth of his third child. Considering that such a simple gesture can be taken completely out of context, how easily can an emotively charged topic such as lion hunting be misrepresented.

Animal rights organisations rely on continual donor funding and repeatably punt emotionally charged images of animals in appalling conditions. The media is fraught with images concerning animal welfare and abysmal living conditions, often referred to as major threats to lions living in controlled environments.

The Late Minister of Environmental Affairs, Dr Edna Molewa on

numerous occasions encouraged all concerned with the welfare of lions living in controlled environments to report malpractices and assist in rooting out illegal practices, if and when they occur.

According to the National Council of Societies for the Prevention of Cruelty to Animals (NSPCA) annual reports from 2015 to 2017 they visited over 113 facilities across South Africa housing over 3071 lions (NSPCA, NSPCA - Annual Report (2015-2016), 2016) & (NSPCA, NSPCA, 2017). After careful review of both reports NO references could be found of a single case where the NSPCA laid formal charges against a facility with animal welfare concerns and / or for contravening the Animal Protection Act.

These irregularities only highlight the “misperception” of “public perception”.

Figure 4 - Cartoon; depicting the financial exploitation by animal rights organisations



Despite the significant attention trophy hunting received in the wake of Cecil’s death, it is not a factor contributing to the wildlife current declining status. The loss of habitat to agricultural expansion is the underlying factor that gives rise to all major threats to wildlife. Having lost at least 75% of their original habitat over the past 100 years. (K Wood, 2016)

Recently, various animal rights organisations tried to drum up the same media hype about the local Kruger lion called “Skye” with publications such as “Skye is the Limit – The Kruger Lion Hunt Saga Continues” (de Waal, 2018). Perceived public perception is now becoming more important than fact based scientific research and conservation objectives. The greatest threat now facing lion conservation is the emotional exploitation of urbanites and negative public opinion, while real conservation objectives are halted due to bureaucracy and trade restrictions.

**As legal trade and sustainable use models continue to be incumbered on by the emotional-economic gain of animal rights movements, wildlife will pay the ultimate price as land use practices will be converted to more economically beneficial alternatives for rural people.**

The latest trend surrounding public perception is the claim that, the regulated hunting of lions is damaging ‘BRAND SOUTH AFRICA’. This is simply not true because at parliamentary colloquium on CBL held in August 2018, the Director of ‘Brand South Africa’ stated that it is highly unlikely that the existence of lions in controlled environments has had any detrimental effect on South Africa’s reputation abroad; and that such an idea was

simplistic. Officially debunking the animal rightists' terror-tactic and propaganda campaign. (Thomson R, 2018)

The unfortunate reality of animal rights organisations is that they are not there to conserve wildlife but rather to enrich themselves. This became evident when John Hume the largest individual Rhino conservationist in the world, sent out a “**global plea**” for much needed funding to continue protecting the 1 600 Rhino in his care. Despite the millions of dollars that animal rights organisations have raised over the last several years with their “Save the Rhino campaigns”, not a single animal rights organisation came forward to assist Mr Hume.

**The truth is animal rights organisations are not in it for the conservation of wildlife. They are in it to exploit well-meaning people's emotions, by profiteering from “public perception” created through media sensationalism. Individual animal rights organisations often generate a greater annual turnover/income than the legal lion hunting industry.**

#### 2.4. FUNDING CONSERVATION IN SOUTH AFRICA

Wildlife species are preserved and well protected within South African National Parks (SANParks) as well as several Provincial Parks, all of which are protected and funded by the South African government.

**The financial cost of maintaining our National Parks is a huge financial responsibility. SANParks received government grants in excess of R 2.6 billion during the time period of 2015 and 2016. According to their financial records, without this essential funding SANParks would have recorded a financial deficit of over R 2 billion. (SANParks, 2016) Similarly, the combined annual management budgets for 8 of the 45 small reserves is US\$ 12.7 million (±R 217 million) (Packer C. C., 2013).**

Upon further review, it would appear that **not a single one of our National or Provincial Parks in South Africa are financially self-sustaining or economically viable.** Many parks are unable of even attaining their annual management budgets without government grants or funding.

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

Table 1 – Management budget required to maintain 8 small reserves

	Size of PA km <sup>2</sup>	Management budget per km <sup>2</sup>	Total Management budget	Annual (US\$ 1.00 = ZAR 17.00)
Hluhluwe-iMfolozi Park	960	US\$ 3 764.00	US\$ 3 613 440.00	R 61 428 480.00
Kwandwe	185	US\$ 2 567.00	US\$ 474 895.00	R 8 073 215.00
Madikwe	620	US\$ 4 839.00	US\$ 3 000 180.00	R 51 003 060.00
Makalali	203	US\$ 938.00	US\$ 190 414.00	R 3 237 038.00
Phinda	246	US\$ 6 543.00	US\$ 1 609 578.00	R 27 362 826.00
Pilanesberg	572	US\$ 3 715.00	US\$ 2 124 980.00	R 36 124 660.00
Tembe	300	US\$ 690.00	US\$ 207 000.00	R 3 519 000.00
Welgevonden	370	US\$ 4 215.00	US\$ 1 559 550.00	R 26 512 350.00
<b>Total</b>	<b>3456</b>		<b>US\$ 12 780 037.00</b>	<b>R 217 260 629.00</b>
<b>AVG</b>		<b>US\$ 3 697.93 per km<sup>2</sup></b>		<b>R 62 864.76</b>

(REF TABLE S1) - (Packer C. C., 2013)

The research done by Packer *et al.* “Conserving large carnivores: dollars and fences” highlighted the predicted costs and estimated management budgets required to maintain these areas. It is alarming to note that based on these estimates the average management budget of the 8 small reserves in South Africa was US\$ 3 697.93 or R 62 864.76 per km<sup>2</sup>. (Packer C. C., 2013)

Our National Parks provide a vital function in protecting biodiversity but are not economically self-sustainable. Similarly, fenced reserves are very effective, but these reserves include many small populations that require metapopulation management, euthanasia, and contraception and only make limited contributions to ecosystem functionality and conservation outcomes. (Bauer H, 2015)

It is very clear that the financial burden of lions is the reason why these reserves lack the funding to manage their lion populations effectively and according to the scientific authorities NDF, there is **no budget or capacity to fund a national coordinated system.**

The lack of a sound metapopulation management plan for these small reserves undermines the conservation value of the privately protected subpopulations and increases the risk of inbreeding (Björklund, 2003) (Miller S, 2016) While many documents show awareness of the threats and recognition of solutions, the continued decline in Lion range and numbers show that political priority and funding are not sufficient (Packer C. C., 2013)

### 3. PART A: ELEPHANTS

The **STRATEGIC OBJECTIVE** or most important focus area for the Panel of Experts is firstly to bring about the policy and legislative reforms required to transform and grow the wildlife economy, where **Elephants are positively managed, produced and sustainably utilized for the socio-economic and environmental benefit of all South African people and NOT negatively protected to the detriment of sustainable biodiversity conservation or at the expense of our people.**

PHASA made the required submission with regard to the NATIONAL NORMS AND STANDARDS FOR THE MANAGEMENT OF ELEPHANTS IN SOUTH AFRICA in November 2018 where serious concerns were raised and recommendations were made to achieve the above mentioned Strategic Objective but have clearly not been understood. For DEFF to require the Panel of Experts to focus on policy positions concerning Elephant management aspects such as keeping elephants in captivity, hunting, population management including contraception without first identifying the strategic objective of this panel is not logical and places the cart before the horse.

#### 3.1. KEEPING OF ELEPHANTS IN CAPTIVITY:

This is not a PHASA area of expertise but PHASA supports the keeping of well managed elephants in captivity for educational, tourism and security reasons where responsible welfare considerations are applied. The legal requirements for keeping elephants in captivity, compliance and enforcement protocols and measures should be enabling, based on logic, common sense and NOT over restrictive. One can NOT legislate in order to achieve good levels of management as this is best achieved through education.

#### 3.2. HUNTING OF ELEPHANTS:

For DEFF to question whether the legal hunting of elephants should be permissible or not, shows a clear lack of understanding of our constitutional, cultural, traditional rights to positively manage and sustainably utilize elephants (a renewable natural resource) through responsible hunting.

Rural African people are best motivated to conserve elephants on their land when the sustainable use of this renewable natural resource, gives greater socio-economic rewards than other land use options. Responsible hunting for the direct benefit of landholders who conserve elephants is one of the best management tools to achieve tolerance for elephants and incentives for sustainable elephant conservation.

Meaningful transformation of our legal system must therefore create an enabling environment that stimulates sustainable growth of the legal elephant economy for the direct benefit of our rural people who carry the cost of conserving or living with elephants.

Figure 5 – Human wildlife conflict example of an elephant



Having studied the National Norms and Standards for the Management of Elephants in South Africa (the document) the Professional Hunters Association of South Africa has the following observations and comments:

- *The document defines and talks to “adaptive management” yet imposes more restrictive and impractical permitting regulations that make it almost impossible for wildlife managers to implement practical, positive adaptive elephant management practices. Wildlife managers are actually prohibited through these regulations, from taking active responsibility for the management of elephants under their control.*
- *It is NOT possible to create elephant management capacity or to develop responsible biodiversity management practitioners, through the imposition of more restrictive legislation. Adaptive management is best facilitated through education and is hindered by unnecessary and cumbersome regulations.*
- *The Norms and Standards for the Management of Elephants in South Africa, as published in the Government Gazette No 1208 of 2 November 2018, endorse and entrench the outdated, protectionist NEMBA legislation. The unnecessary rules which prohibit, hinder or frustrate the sustainable use of renewable natural resources for the benefit of our people and restricts growth in the biodiversity economy sector have been compounded through these Elephant Management Regulations.*

- *The Norms and Standards for the Management of Elephants in South Africa, as published in the Government Gazette No 1208 of 2 November 2018 ignores the urgent need to transform NEMBA, so as to align with the current national policy of creating an enabling legal and regulatory environment to grow the biodiversity economy.*

Landholders or their representatives who are directly involved with the conservation, production and management of elephants must take responsibility by becoming the management authority for elephants on their land, with enabling educational and logistical support from relevant government departments.

### 3.3. POACHING AND WILDLIFE TRAFFICKING:

Elephants have been identified as being amongst some of the key species impacted by high levels of poaching and wildlife trafficking.

In order to limit poaching and the senseless slaughter of our elephant in an effective sustainable manner, the cause of this problem needs to be identified and addressed rather than only addressing only the symptoms of this problem through stricter legislation and improved law enforcement.

Poverty, created by **unjust laws**, that inhibit or deny rural people their constitutional, cultural and traditional rights to sustainably utilize elephants and the **CITES trade bans** that prevents these landholders and wildlife managers from deriving any benefits from legal ivory trade, are the most important cause of the poaching and trafficking problem.

The outdated, unjust laws and CITES trade bans that fuel the fires of elephant poachers and illegal traffickers of ivory need to be rectified in order to address the cause of this problem.

Poachers of elephants may be positively converted into Protectors of elephants when they are empowered to legally benefit from the responsible and sustainable use of this magnificent renewable natural resource.

Our South African people who have invested in wildlife, not only in financial terms but in sweat equity, who feed or provide the required habitat and risk their lives to protect their animals day and night, should be assisted to optimize legal economic benefit from their wildlife investment.

### 3.4. POPULATION MANAGEMENT:

Elephants are aggressive invader species where excessive populations cause a massive negative impact on the more sensitive species, biodiversity conservation goes into decline

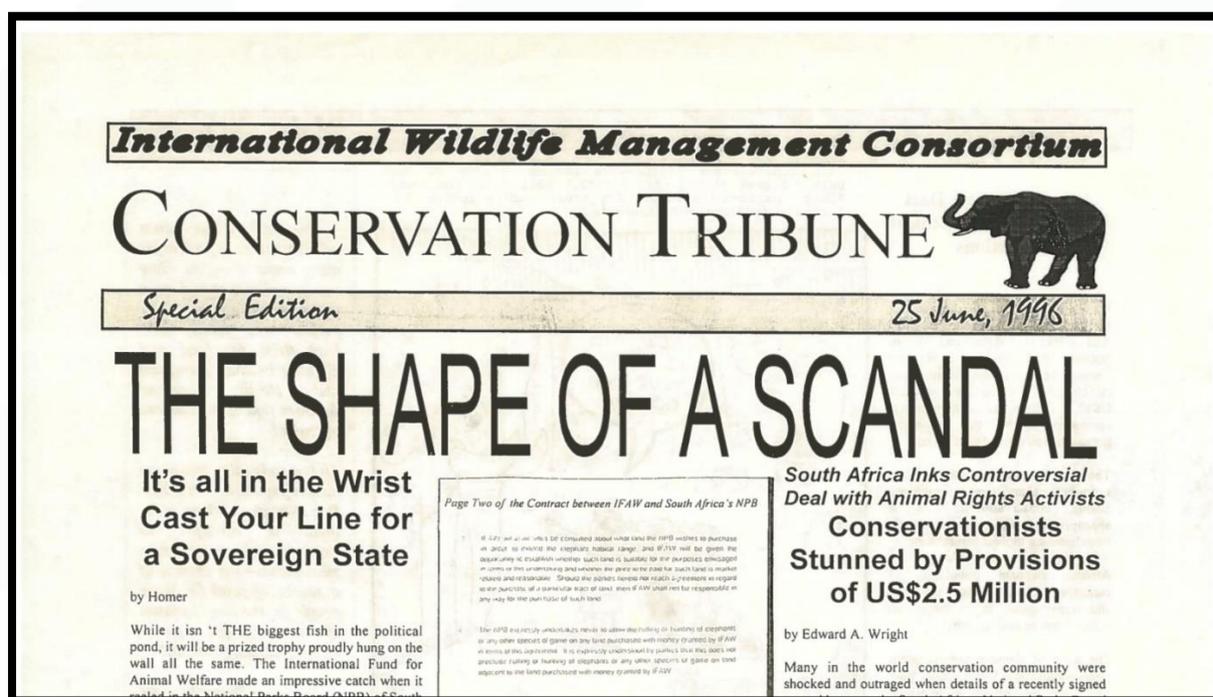
## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

with compromised eco-system services associated with increased soil erosion and desertification.

It is the responsibility of the management authority of our parks or private wildlife areas to maintain the populations of elephant according to the carrying capacity of the habitat, so as to maintain optimal biodiversity conservation within any wildlife area.

Is the environmental destruction of our National Parks not the price we are now paying for the alleged 1996 ‘capture’ of our National Parks Board (NPB), by the International Fund for Animal Welfare (IFAW) and the Humane Society of the United States (HSUS)? The 25 June 1996, Special Edition of the Conservation Tribune published by the International Wildlife Management Consortium reported the following;

Figure 6 – “Shape of a scandal” – Conservation Tribune headline



(Conservation Tribune, 1996)

*“In the deal NPB agreed to accept US \$ 2.5 million (in five instalments of \$ 500 000,00 a year) from IFAW to purchase additional elephant habitat for Kruger National Park on condition, among other things, that NPB expressly undertakes never to allow the culling or hunting of elephants or any other species of game on any land purchased by IFAW.*

*In addition NPB undertook NOT to submit a proposal to resume international trade in elephant products to CITES at the COP meeting of of 1997. In conjunction with the agreement the HUUS offered a further US\$ 2.5 million to NPB to seek viable contraceptives for elephant.*

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

Eugene Lapointe, former Secretary General of CITES, roundly criticized the move, saying that NPB had abdicated the sovereign rights of South Africa for a bowl of porridge.” End quote.

Figure 7 – “Elephant Contraceptives” – Conservation Tribune headline



(Conservation Tribune, 1996)

It is common knowledge that the culling of elephants no longer takes place in Kruger National Park and that elephant contraception has been tried. The destruction of water points in Kruger National Park with the planned intent of allowing elephants and many other species to die the slow agonizing death through thirst and starvation goes beyond comprehension. This wasteful destruction of wildlife (in order to appease the whims of the animal rightists who “captured” NPB) that could be used to counter the current levels

of poverty and food insecurity that are prevalent in the poor adjacent communities is an absolute disgrace.

The concept of:

- Saving a so-called endangered species by preventing them from breeding through contraception or allowing them to suffer and die of thirst defies all logic. Elephants that require contraception or destruction of water infrastructure to prevent an overpopulation of the species are clearly NOT an endangered species yet CITES imposes trade embargoes on elephant products because of the false claim that they are endangered in Southern Africa.
- Allowing an ever-increasing population of elephants to destroy the habitats required for the long-term survival of our wildlife heritage because of a pay-out is in PHASA's opinion an environmental and constitutional crime beyond comprehension.
- Destroying the economic value of elephants through CITES trade embargoes and then expecting our rural people to provide land and protect valueless animals that are a threat to their lives and livelihoods is bizarre and totally unacceptable.
- To try and address an elephant overpopulation problem through contraception or instigating the wasteful death or reduced reproduction rates through thirst and starvation, is most certainly not beneficial to the wildlife economy.
- Allowing an overpopulation of elephants to destroy or have a negative impact on the biodiversity of our protected areas due to alleged 'state capture' from activists who are opposed to the constitutional and cultural rights of our people, needs to be investigated and addressed at the highest level.

### 3.5. TRADE IN ELEPHANT IVORY:

To pose the question of Ivory export, Trade or no trade is a most unfortunate indicator that DEFF is not clear on the STRATEGIC OBJECTIVE of this Panel.

Ivory trade bans do not stop poaching and illegal trade but actually fuel the fires of poachers and wildlife traffickers. In order to grow the wildlife economy elephants need to be optimally and positively produced according to the long term carrying capacity of their habitat and then utilized responsibly and sustainably for maximum economic benefit to the communities of landholders who pay for elephant conservation.

Economic benefit obviously includes legal internal trade in ivory and all other elephant products such as meat, leather and bones. Local businesses should be involved in the value add to elephant products-ivory and bone carving, leather products and meat processing.

Quotas are determined by sustainable production levels and mechanisms of trade should be as far as possible based on the free market principles.

Figure 8 – Burning Ivory or rhino horn is not conservation as it is not the wise use of a natural resource.



### 3.6. IMPACTS AND BENEFITS:

The impacts and benefits of growing the wildlife economy where, **“Elephants are positively managed, produced and sustainably utilized for the socio-economic and environmental benefit of all South African people and NOT negatively protected to the detriment of sustainable biodiversity conservation or at the expense of our people,”** will encourage elephant conservation on private and community land, improve tolerance towards elephants and enable elephant habitat to be correctly managed.

Alternatively by making elephants valueless to rural people through over regulation, poor administration and CITES trade embargoes, will cause elephants to be eliminated outside of protected areas and replaced with the cow and the plough.

### 3.7. HANDLING AND WELL-BEING:

The practices relating to the management, handling and well-being of all animals should always be of the highest standard regardless of the whether they are intensively, semi-extensively or extensively managed.

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

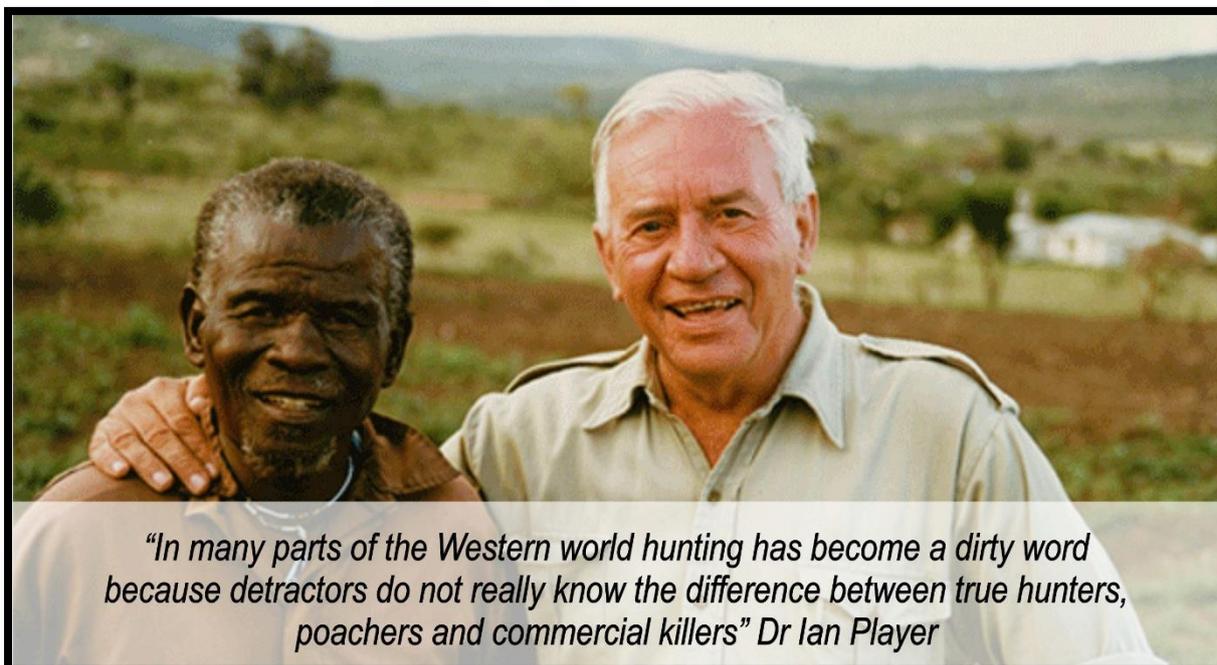
The relevant management authority must at all times be held responsible and fully accountable for the correct management and well-being of wildlife under their control or management, regardless of the whether they are intensively, semi-extensively or extensively managed.

Instigating the wasteful death or reduced reproduction rates of elephants in our National Parks through thirst and starvation, by the planned destruction of water points is most certainly not beneficial to the well-being of elephants yet those responsible for this disgraceful situation are not held accountable.



#### 4. PART B: RHINOCEROS

Figure 9 – Magqubu Ntombela and Dr Ian Player, both legendary rhino conservationists



##### 4.1. INTRODUCTION

Rhinoceros are a flagship species that require large areas of land with wholistic, ecologically sustainable production and management measures, which in turn conserve a wide range of biodiversity. A conservative stocking density for rhino should not exceed 0.5 animals per 100ha (Botham, 2005)

In the late 1980s no more than 50 white rhinoceros survived in the iMfolozi Game Reserve. The South African wild white rhinoceros population has grown at just over 7% since 1991 to approximately 17 208 animals as at the end of 2015, of which 12 273 (72%) and 4 735 (28%) occur on state-owned and private land respectively. This unprecedented conservation success story is a direct result of the positive policy changes both internationally and locally, that allowed for private ownership, live sale auctions and responsible trophy hunting of white rhinoceros.

The total area occupied by white rhinoceros in South Africa exceeds 49 000 km<sup>2</sup>, of which 18 000 km<sup>2</sup> is private or communal land (Scientific Authority of South Africa-NDF Findings for Southern white rhinoceros. 12 July 2018).

Black rhinoceros were widespread in sub Saharan Africa in the early 1970s and their have dramatically declined in most other African range states over the last three generations (43.5 years). In South Africa the black rhinoceros numbers have have increased from a low of approximately 110 animals in 1930 to a population of about 1 893 individuals as at the

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

end of 2015, of which 1382 (73%) and 511 (27%) occur on state-owned and private land respectively.

The private sector in South Africa has spent approximately R 2 billion on rhinoceros management and protection between 2009 and 2017 and now conserve more rhinoceros than there are white and black rhinoceros in the whole of the rest of Africa.

Rhinoceros are possibly the most valuable and therefore the most vulnerable species with regard to illegal exploitation through corruption, poaching, and trafficking of rhino horn.

CITES has FAILED in their efforts for over 40 years, to protect rhinoceros as populations of these species have been decimated by illegal exploitation throughout most of their natural ranges in the world.

South Africa and Namibia are the exceptions to the world wide trend of declining rhinoceros populations as these are the only countries in the world where international legal trade in rhinoceros through responsible hunting is permitted.

PHASA furthermore supports the DEFF strategy that relies on the appropriate research and evidence to support decision making processes that relate to the future of South Africa's rich biodiversity, including rhinoceros, and its socio-economic and environmental benefits for the people of our country

### **The recommended strategic objective of the High Level Panel is:**

**“To secure the meta population of rhino(s) in South Africa for the socio-economic and environment benefit of our country and our people.”**

This strategic objective is achievable through a robust integrated approach by all the stakeholders, who meaningfully contribute to the positive management, production and conservation of rhino, rather than concentrating on their negative protection.

The National Rhino Research Strategy has mainly focused on the protection and management of the rhino in State managed parks and game reserves as South Africa is the custodian of up to 90% the worlds remaining Rhino populations.

The High Level Panel (HLP) and all concerned need to understand that the private Rhino owners of South Africa have currently paid for, own, provide land, conserve and protect between 40% and 50% of the total Rhino population in our country, at entirely their own risk and cost, for minimal financial return.

The active involvement and value of the private hunting and game ranching sector, in both the recovery of Rhino numbers and the most important role of the private sector in the current and future positive management, production and sustainable conservation of rhino in South Africa, can not be over emphasized.

**The HLP needs to take cognizance of the fact that the management objectives of the private hunting and game ranching sector, as well as our rural communities, are very different from those of our protected areas.**

The differences between protected area and private wildlife management include:

- Protected areas were created to prevent the utilization of wildlife by our people who were in many cases removed or alienated from their land and wildlife to create game reserves or protected areas. Wildlife has been reintroduced to the land to be positively managed and sustainably used for the socio-economic and environmental benefit of our people by the private hunting and game ranching sector.
- Wildlife legislation and regulations such as NEMBA and TOPS were created to give negative protection to animals that occurred in protected areas and those classified as res nullius.
- NEMBA and TOPS were not designed to facilitate economic growth through the positive management and production of natural resources for the benefit of our people. The need to transform our legislation in order for the current biodiversity economy and for the transformation strategy to succeed, was recognized as one of the most important outcomes of the biodiversity economy lab process.
- Biodiversity conservation is the prime function of protected areas and any economic benefits are of minor or secondary importance, as our national and provincial parks are state funded. Economic viability is a prerequisite of any self sustaining, community or private wildlife business, where the improved conservation of biodiversity is a most important outcome of this commercially sustainable activity.
- Protectionist ideologies and the enforcement of the precautionary principle are the buzz words of many people, claiming to be conservationists, who view the creation of wealth from wildlife as a cardinal sin. There are many con-artists who enrich themselves by raking in donations from our well meaning public with the false claim of protecting rhino, yet make no meaningful, positive contribution rhino conservation and wish to impose their perceived ethical superiority on others.

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

- Protectionist ideology can not be permitted to override the constitutional right of our people to positively produce, manage and utilize all renewable natural resources sustainably (including rhino) for our socio-economic and environmental benefit.

It is important that the differences between the public and private wildlife sectors should NOT be used to create divisions between the two sectors as they are both have important but different roles to play and must be mutually supportive in order to achieve our strategic objective. .

Figure 10 – White rhino cow and calf



*No domestic species has gone extinct because it was valuable, so why is high value a threat to wild species, rather than an enormous opportunity? - Brian Child*

**Rhinos that are positively managed and produced, particularly outside of protected areas, require a transformed and enabling legal and regulatory environment in order to prosper, rather than over restrictive, inhibiting or inefficient bureaucratic system.**

The formation of meaningful, effective partnerships between the public and private sectors of the wildlife industry, based on mutual respect and trust may be facilitated with the clear understanding that by working together as equals, we can achieve more.

It was most encouraging to see that this genuine desire for meaningful partnerships between the public and private sectors of the wildlife industry was fully endorsed by all concerned through the recent Socio Economic Transformation (SET) plan conferences hosted by our National Parks Board.

Whilst we welcome efficient law enforcement initiatives and better anti poaching strategies to protect all our rhino PHASA strongly opposes unnecessary legislation and trade bans that pose a major hindrance to the private wildlife sector and are believed to be, actually fueling the fire of corruption, and the criminal syndicates who entice our poor people to become involved in illegal trafficking and poaching activities. The evidence is clear as the increased poaching onslaught on the worlds rhinoceroses continues despite the numerous restrictive laws, trade bans and law enforcement initiatives aimed at curbing it.

We need to adapt our game plan in order to achieve our desired outcome:

“A robust integrated approach by all stakeholders to secure the meta population of rhino(s) in South Africa.” For the benefit of our people and strive to make the Socio-Economic Transformation Plan of our National Parks Board and our National Development Plan a sustainable, successful initiative that achieves international acclaim.

**PHASA supports and remains fully committed to the SET Plan initiative of our National Parks Board as well as our National Development Plan to Transform and Grow our Wildlife Economy - by working together as partners in positive rhino management, production and conservation, we will achieve more.**

Positive management and production of rhinoceros is a prerequisite for both the socio-economic and environment benefit of South African people and for the secure future of our rhinoceros, to take place.

PHASA is however seriously concerned that the Department of Environment Forestry and Fisheries (DEFF) lacks the understanding, commitment or courage to make the transformation from negativity protecting rhinoceros to facilitating an enabling environment that allows the positive management and production of this most valuable renewable resource.

The latest reason for PHASA’s concern is that despite the State of Emergency and whilst submissions to the HLP concerning the management and trade in Rhinoceros, are in progress, Vol.660, Government Gazette of 3 June 2020, No. 43386 was published by The DEPARTMENT OF ENVIRONMENT, FORESTRY AND FISHERIES.

No. 625; NEMBA (10/2004). NOTICE PROHIBITING THE CARRYING OUT OF CERTAIN ACTIVITIES INVOLVING RHINOCEROS HORN;

No. 626; NEMBA (10/2004). REGULATIONS RELATING TO TRADE IN RHINOCEROS HORN.

No. 627; NEMBA (10/2004). AMENDMENT OF THE ALIEN AND INVASIVE SPECIES LIST AND LIST OF CRITICALLY ENDANGERED, ENDANGERED, VULNERABLE AND PROTECTED SPECIES.

NEMBA (10/2004) and TOPS regulations that were designed and introduced to negatively protect rhinoceros have been unilaterally enforced by DEFF, despite objections raised by PHASA and others from the private wildlife sector who positively manage and conserve rhinoceros.

PHASA was an active participant of the WILDLIFE ECONOMY LAB. 2016 and makes reference to the following most important initiatives or outcomes of this process that have been endorsed by the highest levels of our Government.

#### **INITIATIVE 9 of the WILDLIFE ECONOMY LAB**

#### **TO CREATE AN ENABLING LEGISLATIVE ENVIRONMENT THROUGH THE AMENDMENT OF THE NATIONAL ENVIRONMENTAL MANAGEMENT:BIODIVERSITY ACT ,2004 (ACT NO 10 OF 2004) (NEMBA)**

The laws, rules and regulations applied to the wildlife sector through NEMBA were **NOT** designed to stimulate economic growth through the sustainable use of renewable natural resources for the benefit of our people. NEMBA was designed give negative protection to wild animals found in our State managed parks and game reserves or on open areas where wildlife is classified as *res nilus*.

These negative protective wildlife laws have been one of the greatest inhibiting factors that has alienated rural African people from positively managing and utilizing their wildlife heritage sustainably.

The need to transform existing wildlife laws (NEMBA) that are unnecessarily restrictive, and have a negative impact on the economic development and growth of the wildlife sector was therefore one of the most important outcomes of Operation Pakisa, and the Biodiversity Economy Lab that have been endorsed by our Countries President.

DEFF have failed to transform NEMBA and continue to introduce and enforce more negative protectionist regulations as in Vol.660, Government Gazette of 3 June 2020, No. 43386

**INITIATIVE 13 of the WILDLIFE ECONOMY LAB:**

**TO REPOSITION THE WILDLIFE FORUM AS AN INTERDEPARTMENTAL - INDUSTRY COLLABORATION AND CO-ORDINATING PLATFORM TO PROMOTE THE BENEFITS OF THE WILDLIFE ECONOMY.**

**The Wildlife Forum**

**Participants** are DEFF, DARD, provincial conservation and environmental authorities, and representatives of the organized wildlife and hunting industry including PHASA.

**Core business:** The Wildlife Forum's purpose is to:

- Promote conservation through sustainable use of renewable natural resources:
- **Contribute to building a responsible, self-regulatory wildlife and hunting sector:**
- Promote sustainable growth in wildlife related tourism, with equitable benefit sharing:
- Create enabling conditions for transformation of the sector.

**The Forum makes inputs to relevant law-making processes**, alerts government to issues on which collaboration and improvement is needed and facilitates collaboration and cooperation within the industry. The Wildlife Forum appoints standing or ad hoc sub-committees or technical teams to deal with specific issues according to need.

PHASA furthermore made a detailed submission on the Draft National Rhino Research Strategy (NRRS) of 11 October 2018 and fully supports the principle of working together and forming effective partnerships so we can achieve more.

In the above mentioned PHASA submission concerns and objections were raised with regard to:

No. 4061. Government Gazette, 8 February 2017,  
Department of Environment Affaires Notice 74 of 201.

DRAFT REGULATIONS FOR THE DOMESTIC TRADE IN RHINOCEROS HORN. OR A PART, PRODUCT OR DERIVATIVE OF RHINOCEROS HORH.

As well as:

No 41919. Government Gazette, 21 September 2018,

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

Department of Environment Affairs No. 986.

DRAFT REGULATIONS RELATING TO THE TRADE IN RHINOCEROS HORN

Where PHASA made the following observations:

*“Benefaction of rhino horn in any shape or form whether it could be for art, jewellery, homeopathic or traditional medicinal purposes is prohibited by law in South Africa.*

*Is it not hypocritical and wrong, to miss lead communities into believing that they are being empowered through rhino ownership and the wildlife economy, yet we continue to impose or introduce protectionist legislation that prohibits the free market, legal trade in rhino horn that is legally owned and NOT poached, thus rendering it legally valueless.?*

*Our current environmental laws are therefore responsible for allowing only the criminal syndicates the opportunity of empowering community members, to have any significant economic benefit from their investment in rhino and are believed to be the underlying cause of the and illegal poaching problem.*

*Restrictive laws and trade bans that prevent the legal, sustainable use of wildlife do NOT prevent illegal trade in wildlife or wildlife products from taking place. They only fuel the flames of corruption, wildlife trafficking, poaching and the illegal trade.”*

According to our knowledge the Wildlife Forum and was not actively involved and no resolution was passed by the wildlife forum in support of the creation of the restrictive laws as published in Vol.660, Government Gazette of 3 June 2020, No. 43386. The PHASA objections to the introduction and implementation of the predecessors of these negative, restrictive regulations have been ignored.

The publication of Vol.660, Government Gazette of 3 June 2020, No. 43386; by the DEPARTMENT OF ENVIRONMENT, FORESTRY AND FISHERIES that include; No. 625; NEMBA (10/2004). NOTICE PROHIBITING THE CARRYING OUT OF CERTAIN ACTIVITIES INVOLVING RHINOCEROS HORN; No. 626; NEMBA (10/2004). REGULATIONS RELATING TO TRADE IN RHINOCEROS HORN.

- Ignores or rejects the most important outcomes of the Wildlife Economy Lab process that includes the urgent need to transform NEMBA alongside the meaningful role and function of the Wildlife Forum
- Ignores or rejects the call for meaningful public- private partnerships in positive rhinoceros production, management and conservation

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

- Ignores or rejects the positive empowerment of our previously disadvantaged people to have meaningful and beneficial ownership of rhinoceros
- Ignores or rejects the principles of an enabling environment that frees up responsible legal trade in, or beneficiation of rhinoceros products for the sustainable development of our people
- Ignores or rejects the National Development Plan that calls for a reduction in poverty and inequality through the positive management and sustainable utilization of all natural resources that include rhinoceros.
- Ignores or rejects the human rights of rural people to earn a livelihood from the positive management, production and sustainable utilization of rhinoceros and rhinoceros horn - their most valuable renewable natural resource
- Ignores or rejects the fact that restrictive laws and trade bans that prevent, frustrate or hinder the legal, sustainable use of rhinoceros do NOT prevent illegal trade in rhinoceros or rhinoceros products from taking place.
- Ignores or rejects the fact that restrictive laws and trade bans actually fuel the flames of corruption, wildlife trafficking, poaching and the illegal trade in rhinoceros horn.
- Failed to define the meaning of “ownership” of rhinoceros horn and fails to respect the rights of the lawful owners of rhinoceros horn.
- Undermines the core function and purpose or strategic objective of the HLP - that is to secure the meta population of rhino(s) in South Africa for the socio-economic and environment benefit of our country and our people.

Despite the above mentioned serious concerns PHASA remains committed to the purpose of the positive change required to transform and grow our wildlife estate and economy as requested by our President - “To grow the the current 20 million hectares of white owned wildlife land to 30 million hectares by introducing an additional 10 million hectares of black owned wildlife land that is economically sustainable.”

PHASA fully supports this Presidential request along with the elimination of poverty and inequality, by creating meaningful, sustainable jobs, by improving local small business and trade opportunities with a better life for all through the positive management and production of our rhinoceros

This reinforces the recommended strategic objective of the HLP which is:  
“To secure the meta population of rhino(s) in South Africa for the socio-economic and environment benefit of our country and our people.”

Figure 11 – PHASA supports A POSITIVE NATIONAL RHINO MANAGEMENT and PRODUCTION STRATEGY that is in PARTNERSHIP with COMMUNITIES and the PRIVATE SECTOR.



*PHASA supports A POSITIVE NATIONAL RHINO MANAGEMENT and PRODUCTION STRATEGY that is in PARTNERSHIP with COMMUNITIES and the PRIVATE SECTOR.*

#### 4.2. THE APPROACH

To continue supporting the evidence base approach, by the implementation the following enabling principles that will transform and grow the wildlife economy for the benefit of our people and our rhinoceros.

- Transformation through partnerships with a vibrant civic society. Role players who are directly involved with wildlife production and management, must take responsibility for transforming their industries with enabling educational and logistical support from relevant government departments.
- Over regulation is a hinderance to conservation and the wildlife economy. The need for efficiency requires the elimination of as many government fees and unnecessary bureaucratic regulations as possible. This allows wildlife to be as competitive as possible with other land use options.

- Transformation of the wildlife economy is achieved by boldly entrusting landholders with full ownership of wildlife, by declaring them the ‘appropriate authority’ for wildlife on their land.
- The future of wildlife lies in making it MORE valuable and NOT less valuable to rural people provided ownership rights are first granted to landholders.
- Landholders have the right to use wildlife as profitably as they see fit, provided treatment of animals is humane and welfare concerns are adequately addressed.

### 4.3. DESIRED OUTCOME

The desired outcome as articulated by the Rhino Lab and other workshops remains: “A robust integrated approach by all stakeholders to secure and positively manage the meta population of rhino(s) in South Africa for the socio-economic and environmental benefit of our people.”

#### 4.3.1. MAINTAINING VIABLE RHINO POPULATIONS.

The availability of additional land for rhino conservation is vital for sustainable growth of rhino numbers and can be achieved by growing the current 20 million hectares of white owned wildlife land to 30 million hectares by introducing an additional 10 million hectares of black owned wildlife land that is economically sustainable.”

Land holders (communities or individuals) are best motivated to willingly allocate additional land to conserve all wildlife (including rhino) when the sustainable use of this renewable natural resource gives greater socio-economic returns than other land use options. The rhino strategy must therefore create an enabling environment that stimulates economic growth through sustainable use of rhino, for the direct benefit of our rural people who currently carry the extremely high socio-economic cost, of conserving and protecting these animals on their land for little or no reward.

The enabling environment for this economic growth on private or community land should foster a mutually beneficial or symbolic relationship with our protected areas.

#### 4.3.2. VALUE OF RHINO

Poverty has been identified as one of the greatest threats to conservation and a most important driver for poor rural people to become involved in poaching and other related criminal activities.

Rhino are equivalent to the goose that lays the golden egg and is the species with the greatest potential to transform our wildlife economy for the direct benefit of our people involved in the management, conservation and protection of these animals.

The wise and sustainable use of rhino, through responsible tourism including hunting, as well as the legal trade of rhino and rhino products, is a powerful and legitimate means for transformed land to become economically viable, with a reduction of poverty, increased job creation and economic growth in disadvantaged rural areas.

The future of wildlife outside protected areas lies in making it more valuable and not less valuable to land holders, provided ownership rights to the wildlife are first granted to them.

The commercial value of rhino should therefore be as high as possible, and for the direct benefit of the landholders and rangers who provide the land, the economic cost of feed and the social cost of risking their lives to conserve and protect these animals from the criminal syndicates.

### 4.3.3. GOVERNANCE

Corruption within governance structures is strongly linked to organized crime and will always remain a problem where the individual people involved in the management and protection of our valuable wildlife remain employees and have a limited vested interest in the animals. Over regulation, poor administration or bureaucratic inefficiency, fuels corruption and is a major hindrance to the current conservation efforts of our private rhino owners and the wildlife economy.

The relevant Wildlife Management Associations are already in existence and could easily assist Government departments in managing the administrative affairs on behalf of their members who are actively involved in the conservation, protection and management of rhino. Rhino management organizations remain accountable to government and understand the need to add value to rhino through positive management and conservation on behalf of their members. The creation of partnership with other role players and take responsibility for transforming the wildlife industry with enabling support from government departments is facilitated.

PHASA members run hunting outfitting business and perform a vital role in the wildlife value chain and are a most important anchors or corner stones that supports the rural wildlife economy. This is an incredibly competitive international industry that is subject to fluctuations in the global economy and the free market system.

Some PHASA members are also rhino owners who are strategically placed, keen and willing to assist manage and develop wildlife areas in partnership with rural African communities of landholders but need an enabling environment that allows us to compete internationally and grow the wildlife economy.

#### 4.3.4. INTEGRATIVE APPROACH

An integrated approach to rhino conservation that truly involves all role players who endorse the principle of positive management, production and optimizes the sustainable use of all-natural resources including rhinoceros, for the benefit of our people is fully supported.

#### 4.3.5. ENABLING MECHANISMS

PHASA supports and acknowledges the importance of collaboration and understands the critical role of building a co-ordinated working relationship and alliances with all who sincerely wish to achieve our desired outcome.

The need to transform the legal framework in order to create an enabling environment for the benefit of rhino conservation and the wildlife economy outside of protected areas is endorsed.

#### 4.3.6. PRE-EMPTING UNWANTED FUTURE OUTCOMES.

It is crucial for a timeous response to, or avoidance of undesired outcomes. This is dependent on good, accountable and transparent management and governance structures.

Pre-empting

### 4.4. SUMMARY OF LESSONS LEARNED

PHASA makes reference to Government Gazette No. 42660.

Notice No. 1104 NEMBA Act (10/24) NDF for Black Rhino. March 2018, and

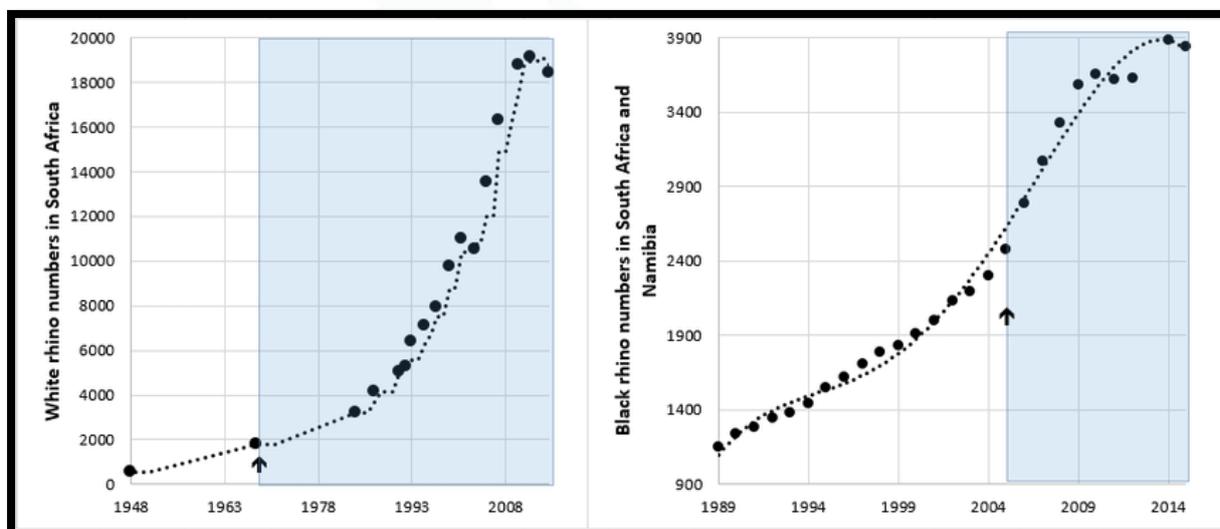
Notice No. 1105 NEMBA Act (10/24) NDF for White Rhino. March 2018, where the following observations were made by the South African Scientific Authority.

- 4.4.1. CITES trade bans on the commercial trade in rhinoceros horn, imposed for over 40 years have FAILED to effectively provide protection for the species in most of Africa where rhinoceros have been wiped out.

- 4.4.2. Despite strict and complicated legislation along with the numerous and costly anti-poaching measures that have been implemented in South Africa the ongoing loss of rhinoceros to poaching for their horn, is currently the most imminent threat to South Africa's rhinoceros populations.
- 4.4.3. The limited effectiveness of protected areas, attempted protection of rhinoceros through stricter negative protectionist legislation, CITES trade bans and anti-poaching measures importantly FAIL to address the cause of the escalating poaching levels.
- 4.4.4. The cause of the ongoing loss of rhinoceros to poaching is the high demand for black market horn at high prices, i.e. the low supply to demand ratio, coupled with poverty and unemployment in rural communities.
- 4.4.5. It is unlikely that the current investment in the protection of rhinoceros from current sources (government and donors) can be sustainable in the long term. It is estimated that between R 0.87 billion and R 1.29 billion per annum is required to secure rhinoceros in the state owned protected areas.
- 4.4.6. The private sector in South Africa has spent approximately R 2 billion on rhinoceros management and protection between 2009 and 2017 and now conserve more rhinoceros than there are white and black rhinoceros in the whole of the rest of Africa.
- 4.4.7. Legal trophy hunting black rhinoceros is beneficial to the conservation and protection of the species in South Africa. (Fig 7; Black Rhinoceros NDF. Emslie, et al.,2016) The previous low off take levels of 3-4 trophy hunted black rhino bulls per year comprising approximately 0.2% of the population have been readjusted and are now calculated at 0.5% of the population. (CITES reports 2019)
- 4.4.8. The white rhinoceros population in South Africa is approximately 10 times larger since trophy hunting was introduced in 1968, despite the translocation of significant numbers of white rhinoceros out of the country to re-stock protected areas in other African countries (where trophy hunting is prohibited and rhino became locally extinct), zoos and safari parks worldwide (Figure 6; White Rhinoceros NDF, Emslie, et al., 2016; Cooney, et al., 2017).

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

Figure 12 – Growth of white and black rhinoceros population in South Africa and Namibia including over a period (shaded in) which trophy hunting has been undertaken (Emslie, et al., 2016).



- Prior to 2005, an average of 36 - 70 white rhinoceros were hunted annually and increased to a maximum number of 116 animals in 2011 (0.6% of the national population), with many of these hunts being undertaken by non-traditional hunters (“pseudo hunters”).
- With the introduction of more strict and negative rhino hunting regulations in 2012 the demand for trophy hunting of rhinoceros in South Africa has dropped to an annual average of take of only 70 white rhinoceros (0.43% of the national population).
- Setting a hunting quota for white rhinoceros has never been necessary in South Africa as this off take has always been well within sustainable levels.
- The need for the implementation of the moratorium to prohibit legal local trade in rhinoceros horn in February 2009, and for stricter rhino hunting regulations in 2012 was NOT because of rhinoceros conservation concerns related to these legal activities, as the legal off take of rhinoceros in South Africa has always been well within sustainable levels.

4.4.9. The outcome of the moratorium to prohibit legal local trade in rhinoceros horn February 2009, and the clamp down on non-traditional hunters in 2012 though stricter hunting regulations, that were introduced to comply with the CITES imposed international trade ban in rhinoceros horn, actually resulted in the escalation of the poaching rate of South African rhinoceros.

- In 2007 only 13 white rhinoceros were poached and reached its peak in 2014 when 1 151 white rhinoceros were poached in South Africa (an estimated 6.5% of the national population). Poaching has declined slightly with an estimated 1 009 wild white rhinoceros poached in 2016 (approximately 6% of the national population) and this trend is continuing possibly because of increased law enforcement and that there are just less rhinoceros left to poach in our protected areas

4.4.10. PHASA agrees with SANBI that the threat of rhinoceros poaching is currently considered to be substantial, though reversible and the current economic cost of rhinoceros protection is not sustainable.

- PHASA believes that the threat of rhinoceros poaching may be reversible only when the cause of the poaching problem, the high demand for black market horn at high prices, i.e. the low supply to demand ratio, coupled with poverty and unemployment in rural communities, is adequately addressed and effectively dealt with.
- Without legal beneficial trade in rhinoceros and rhinoceros' products there is no economic value in managing and producing rhinoceros and rhinoceros will cease to exist outside of protected areas.

### 4.5. MANAGEMENT STRATEGY.

#### 4.5.1. ENFORCEMENT

Management strategies that combat poaching and trafficking are important but only deal with the symptoms and not the cause of the poaching problem, that are a high demand for black market horn at high prices, i.e. the low supply to demand ratio, coupled with poverty and unemployment in rural communities.

Comparisons have often been made between the current rhino poaching crisis in South Africa and guerrilla warfare. This irregular or underground type of warfare is often caused because of the same reasons as those associated with rhino poaching i.e. poverty, social unrest and political upheavals associated with poor governance, corruption, and unjust laws.

In the history of the world, guerrilla wars were never resolved through military intervention alone, but by finding acceptable political and socio-economic solutions, that removed the injustices and dealt with the problems that initiated or caused the war or civil disobedience in the first place. The same approach applies for rhinoceros poaching.

The principles used, that successfully resolved past guerrilla warfare conflicts are applicable to the current rhino poaching problem in South Africa. The rhino war will NOT be resolved by arresting or killing the foot soldiers or poachers in this conflict. The rhino war can only be won by converting poachers into protectors where rhinoceros are positively managed and produced for the socio-economic and environmental benefit of our people.

This may be achieved through eliminating poor governance, corruption and the transformation of our current legal framework that allows our people who are dedicated to rhino conservation and place their lives at risk on a daily basis to derive just rewards for their efforts.

It would appear that DEFF lacks the understanding, commitment or courage to make the required changes to transform the current negative legal and regulatory environment in order to grow the wildlife economy for the benefit of our people and to effectively address the causes of the poaching problem.

#### 4.5.2. COMMUNITY EMPOWERMENT

The NRRS statement that reads:

**“Communities are the most important part of this Strategy”**

This statement is fully supported by PHASA but it would appear that little more than lip service is paid to the issue of Community Empowerment with regard to rhino ownership, conservation and the legal, sustainable use of this valuable, renewable natural resource for their direct benefit.

##### 4.5.2.1. LIVELIHOODS AND BENEFACTION

It is stated in the NRRS that:

**“Communities are empowered, their livelihoods are improved alongside increased benefaction through the wildlife economy.”**

Is this a true statement with regard to rhino and rhino products?

Members of the public have recently been invited to submit comments or objections on the following regulations 3(1)(a), 3(3), 4(1), 7(3), 10(2)(b) 12(2) and (3) and 13(1), within 30 days, as published in The Government Gazette No 4149 of 21 September 2018

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

Government notices NO. 986

National Environmental Management: Biodiversity Act (10/2004):

Draft Regulations relating to Domestic Trade in Rhinoceros Horn

DEPARTMENT OF ENVIRONMENTAL AFFAIRS 41919

21 SEPTEMBER 2018

3.(1) A person may sell, give, donate, buy, receive, accept as a gift, or donate, or in any similar way dispose of or acquire, rhinoceros horn of South African origin only if-

(a) the rhinoceros horn is 5 cm or more in length, irrespective of the weight of the rhinoceros horn;

(b) the rhinoceros horn is marked in accordance with the provisions of TOPS Regulations and the Rhinoceros Norms and Standards, regardless of the size of the rhinoceros horn; and

(c) a permit that authorizes one to sell, give, donate, buy, receive, accept as a gift, or donate, or in any similar way dispose of or acquire, rhinoceros horn, has been issued in terms of the Biodiversity Act.

3 (3) A person may not sell, give, donate, or in any similar way dispose of, rhinoceros horn as contemplated in sub regulation (1) to any non-citizens or people without permanent residence, including companies or trusts where any of the directors, shareholders or trustees are not citizens of have permanent residence in South Africa.

4.(1) To sell, give, donate, buy, receive, accept as a gift, or donate, or in any similar way dispose of or acquire, rhinoceros horn that is 5 cm or more in length, irrespective of the weight of the rhinoceros horn, is prohibited in accordance with a notice published in terms of section 57(2) of the Biodiversity Act.

7,(3) The issuing authority may not issue a permit to sell, give, donate, or in any similar way dispose of, rhinoceros horn as contemplated in sub regulation (1) to any non-citizens or people without permanent residence, including companies or trusts where any of the directors, shareholders or trustees are not citizens of have permanent residence in South Africa.

10.(2)(b) Any person who is in any way involved in rhino horn on behalf of another must be a citizen or permanent resident of S A.

12.(2) and (3). These regulations deal with auctions of rhino horn and in simple terms make it almost impossible and totally impractical to run viable auctions that are an important function of the free market economy.

13.(1) A Pearson may export or re-export rhinoceros horn, only if it is more than 5 cm in length and meets all the other requirements as listed in 3.(1).

These regulations are in addition to those that were published in the Government Gazette No. 40601, Notice No. 74, on 8 February 2017 that have already made it extremely difficult for domestic trade to take place. Perhaps the relevant authority could inform us as to the actual number of rhino horn trade permits that have been issued to date?

Benefaction of rhino horn in any shape or form whether it could be for art, jewellery, homeopathic or traditional medicinal purposes is prohibited by law in South Africa.

Is it not hypocritical and wrong, to miss lead communities into believing that they are being empowered through rhino ownership and the wildlife economy, yet we continue to impose or introduce protectionist legislation that prohibits the free market, legal trade in rhino horn that is legally owned and NOT poached, thus rendering it legally valueless.?

Our current environmental laws are therefore responsible for allowing only the criminal syndicates the opportunity of empowering community members to have any significant economic benefit from their investment in rhino and are believed to be the underlying cause of the poaching problem.

Restrictive laws and trade bans that prevent the legal, sustainable use of wildlife do NOT prevent trade in wildlife or wildlife products from taking place. They only fuel the flames of corruption, wildlife trafficking, poaching and the illegal trade.

#### 4.5.3. RISKS PERCEIVED OUTSIDE PROTECTED AREAS

The greatest risk to rhino outside of protected areas is to reduce their value to land holders through over regulation, poor administration and other issues that prevent legal trade in rhino and their products.

#### 4.6. DEMAND MANAGEMENT:

It is the stated aim of this strategy to have an evidence-based approach to changing attitudes in consumer markets and driving down exaggerated prices of horn. PHASA disagrees with this strategy as by reducing the value of this renewable natural resource

will be counter productive to our biodiversity economy strategies that are to be implemented for the benefit of our people?

The future of rhino outside protected areas lies in making them more valuable and not less valuable to land holders, provided full ownership rights to rhino are first granted to those who positively manage and protect them from the criminals and wish to optimize the sustainable utilization and legal trade in rhinoceros products for their own direct benefit.

PHASA believes that the supply of horn to the market should be well managed and strategic in order to optimize demand and keep prices as competitive as possible.

**PHASA believes that the supply of horn to the market should be well managed and strategic in order to optimize demand and keep prices as competitive as possible.**

#### 4.6.1. CONSUMER MARKETS AND ALTERNATIVE OPTIONS

We agree that investigations should also look at the open market for traditional Asian medicines and clinics, open market for selling rhino horn, artisanal materials as well as the sale of rhino for non-commercial and commercial purposes. Our current regulations unfortunately prevent us from doing this.

The best way to disrupt illicit supply chains is to open legal ones that directly benefit our citizens who legally conserve our rhino in a sustainable manner and protect them from illegal exploitation that is not sustainable and will lead to their extinction.

The export of live rhino and the establishment of captive breeding facilities in consumer states will in the long term destroy our own competitive advantage to the detriment of our wildlife economy. The emphasis should rather be to promote more rhino breeding facilities within South Africa that can stimulate and grow our wildlife economy

#### 4.6.2. DEMAND FOR COMMODITIES

Reviews of the effectiveness and efficiency of past demand management and reduction campaigns should provide guidelines on the development of effect robust future interventions aimed at creating and managing sustainable legal demand for a range of local, regional and international commodities.

### 4.6.3. STOCKPILE DESTRUCTION:

**The wasteful destruction of valuable resources in the name of conservation is a total disgrace as it fuels corruption at the highest level.**

### 4.6.4. PRICE OF RHINO HORN:

Currently the rhino horn can be transformed into different items and there is a need to understand the prices of the horn at different points of the value chain. This will assist in understanding the syndicate dynamics and potential benefits of trade scenarios.

Monitoring system needs to be developed and implemented to gather information relating to prices paid to poachers and the quantity of horn traded.

The potential role of demand reduction and or legal trade to address demand pressures.

The above strategies have merit but the approach to changing attitudes in consumer markets and driving down prices of horn is rejected.

It is clearly not necessary to established if the demand for the horn is for local or international use as the greatest demand for horn is for international use.

## 4.7. GOVERNANCE, POLICY AND LEGISLATION

### 4.7.1. RESPONSIVE LEGISLATION

The Rhino Conservation Lab and the Commission of Inquiry highlighted the need for responsive legislation. Key to responsive legislation is ensuring that these provisions are applicable, enabling, and effectively implemented, and, importantly, understanding whether such provisions have the desired outcome.

Regulations, norms and standards, and policies are becoming increasingly regulatory and complex, but, to date, the efficiency and effectiveness of these legislative provisions are NOT having the desired outcome.

The restrictive, protectionist legislation has been identified as a hindrance to conservation and the wildlife economy through the biodiversity economy lab process of 2016.

It has been reported that there have been over 8 000 poaching related rhino deaths, and more than 2000 sq km of range have been lost to rhino since the domestic moratorium on horn sales.

“Our experience with the illegal trade in rhino horn has shown that poaching operations and illegal trade networks proliferate when there is no legally acquirable supply.” quote from Minister Edna Molewa.

The urgent need to transform the current legal environment is clear to all yet we seem to lack the capability or the will to act positively.

### 4.8. MANAGEMENT OF RHINO

PHASA would like to highlight that optimizing growth in rhino numbers is best achieved through the correct management of herd dynamics and adequate nutrition.

The most important key to growing the national rhino population is increasing the land available for establishment of new populations. This could easily include transformed land provided the economic benefits of having rhino are at least competitive with other land use options.

Individuals from communities with suitable land, could gain experience in rhino management and protection by initially running bachelor bull herds, in partnership with current rhino owners. These bulls should include those that are in excess to current breeding requirements, therefore have less biological value than breeding animals. Revenues may be generated, for the direct benefit of their protectors, through responsible hunting and or horn sales, once an enabling legal framework is in place. This would be an important initiative in motivating community members into becoming the protectors of the rhino that they own, and get just reward for their investment and other risks of rhino conservation.

#### 4.8.1. POPULATION MANAGEMENT OF RHINO

Both species of rhino should be managed as metapopulations, where genetic importance of the large number of rhino owned by the private sector can not afford to be ignored as a vital part of the total metapopulation and managed accordingly.

The most effective way to prevent inbreeding and maximize genetic diversity in our rhino populations is to mate suitable bulls to females that are least related. The private sector is well placed to initiate this program that will involve identification, DNA profiling, registration and recording of all rhino in a national herd register that is maintained by the relevant Rhinoceros Management Association.

By recording and registering all births, deaths, sales or transfers of all privately owned rhino, full traceability of these animals that are hunted and their horn, that may be legally

harvested is also achieved. Legal sale of such traceable horn could take place and at the same time, preventing poached or illegal horn from entering this legitimate marketing system. These structures would be self-funded and administered, with support from relevant Government Departments.

#### 4.9. RECOMMENDATIONS FROM PHASA TO THE ADVISORY COMMITTEE (HIGH-LEVEL PANEL) APPOINTED TO REVIEW EXISTING POLICIES, LEGISLATION AND PRACTICES RELATING TO THE MANAGEMENT AND HANDLING, BREEDING, HUNTING AND TRADE OF RHINOCEROS

The most important recommendations to the HLP for the positive management hunting and trade of rhinoceros and their products are as follows;

The ongoing loss of rhinoceros to poaching for their horn, remains the most imminent threat to South Africa's rhinoceros populations.

5.1. The responsible legal hunting, of both black and white rhinoceros in South Africa should continue to be encouraged, facilitated and optimized, as this incentivize the conservation and protection of the species.

It is unlikely that the the current investment in the protection of rhinoceros from current investment from government, external donors and the private rhino owners can be sustainable in the long term. It is vital therefore to change our approach from the negative protection of rhinoceros at great cost to our country, to the positive management and production of rhinoceros for the socio-economic and environment benefit of our people and our country.

5.2. It is recommended that the legal local and international trade in rhinoceros horn, and locally manufactured rhinoceros products, be facilitated in order to secure the funding requirements for the economic sustainability of rhinoceros management, conservation and protection.

Restrictive negative protectionist legislation needs to be transformed, as it not only FAILS to address the cause of the poaching pandemic, that is coupled with inequality, food insecurity, poverty and unemployment in our rural communities, but actually fuels the fires of corruption, wildlife crime and illegal trafficking of high value rhinoceros products.

5.3. PHASA recommends that Initiative 9 of the Wildlife Economy Lab;” TO CREATE AN ENABLING LEGISLATIVE ENVIRONMENT THROUGH THE AMENDMENT OF THE NATIONAL ENVIRONMENTAL MANAGEMENT:BIODIVERSITY ACT ,2004 (ACT NO 10 OF 2004) (NEMBA)” that has been endorsed by the highest levels

of government be carried out, in conjunction with HAWASA representatives as a matter of urgency.

- All unnecessarily restrictive, negative, protectionist or conflicting and ambiguous rhinoceros legislation, with increasingly regulatory and complex norms and standards, that are NOT having the desired outcome, “ To secure and positively manage the meta population of rhino(s) in South Africa for the socio-economic and environmental benefit of our people” need to be identified, clarified and where necessary eliminated as soon as possible.

5.4. The legal and individual human rights, of the different role players, including rhinoceros owners, rangers, hunting outfitters, local and international hunters, security personnel, managers and others directly involved in rhinoceros management needs to be identified, clarified, and respected.

5.5. The roles and responsibilities of all Government Developments and NGO’s who support the stated objective;” To secure and positively manage the meta population of rhino(s) in South Africa for the socio-economic and environmental benefit of our people.” need to be clearly defined, understood, articulated and adhered to.

5. PART C: LEOPARDS

**Kindly note:**

This part of the document (Part C: Leopards) is a joint submission by PHASA and Conservation Force



# CONSERVATION FORCE

Conservation Force (CF - [www.conservationforce.org](http://www.conservationforce.org)) is a leading non-profit wildlife conservation organization that has planned, funded and actively participated in millions of dollars of conservation projects benefitting lion, leopard, elephant, polar bear and other species in Africa and worldwide. Its purposes are wildlife conservation, education, research and serving the greater public good. It serves the public through support and development of conservation infrastructure locally, nationally, and internationally. It is a comprehensive organization that functions as a worldwide communications centre and information source, monitor, advisory think tank and pro-active advocate for its conservation purposes.

The panel of experts is requested to assess and provide policy positions on the following:

- *Hunting of leopards: rationale and basis for hunting or no hunting, determination of the quotas and associated conditions, hunting standards, methods of hunting*
- *Trade in Leopard skins: trade or no trade, mechanisms of the trade, determination of quotas*
- *Demand management: dynamics of domestic and international demand, demand for leopard products (skins, claws, teeth), legislative and legal regime for demand management*
- *Impact and benefits: how do various management practices and trade in leopard specimens benefit conservation in South Africa?*

## 5.1. STRATEGIC OBJECTIVE

“Wildlife should be positively produced rather than negatively protected” (Leopold, 1933)

The Strategic Objective of Leopard Management and Conservation in South Africa is to positively manage, grow and sustainably utilize our leopard populations, in order to benefit both the wildlife economy for the socio-economic and environmental benefit of our people along with sustainable leopard conservation. **“Leopards should be positively managed and conserved rather than negatively protected”** (Leopold, 1933)

This Strategic Objective is achieved through a wholistic proactive adaptive management approach that:

- Optimizes leopard conservation in order to grow the wildlife economy.
- Encourages landholders to conserve leopards on their properties.
- Minimizes the killing of leopards as damage causing animals.
- Reduces leopard poaching, and the illegal trade in leopard skins and other products.

## 5.2. SCIENTIFIC INFORMATION

In the Red List of Mammals of South Africa, Swaziland and Lesotho published in 2016 by the South African National Biodiversity Institute (SANBI) and Endangered Wildlife Trust (EWT). Leopards are listed as Vulnerable.

South Africa leopard population estimate ranges from 2,813 - 11,632 Leopards which equates to 1,688 - 6,979 mature individuals (60% mature population structure).

This latest Regional Red List of Mammals classifies Leopard in the following manner:

*Panthera pardus* - Leopard

Regional Red List status (2016) Vulnerable

National Red List status (2004) Least Concern

Reason for change Genuine change: Continuing decline

Global Red List status. (2016) Vulnerable

TOPS listing (NEMBA) (2007). Vulnerable

CITES listing (1975) Appendix 1

Endemic No

The headline reads:

“The long-term viability of the Leopard population within the assessment region **may** be at risk due to unsustainable trophy hunting and retaliatory killings. Although there is a **low risk** of extinction over the next 25 years, there is a very high probability of population decline (Swanepoel et al. 2014)”

5.2.1. CONVENTION FOR INTERNATIONAL TRADE OF ENDANGERED SPECIES (CITES). CITES was established to regulate the international trade in endangered wild flora and fauna.

The leopard quota system was introduced at the fourth meeting of the Conference of Parties (CoP) of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) (Gaborone 1983) with [Resolution Conf.4.13](#).

A thorough history of the CITES leopard quota system in CITES can be found in a proposal to CITES CoP 12. (CoP12 Doc. 23.1.2 <https://www.cites.org/sites/default/files/eng/cop/12/doc/E12-23-1-2.pdf>), and in the review presented by Mozambique at the 30th meeting of the CITES Animals Committee (<https://cites.org/sites/default/files/eng/com/ac/30/E-AC30-15-A1.pdf>)

The leopard *Panthera pardus* was included in Appendix I at the Plenipotentiary Conference at which CITES was concluded (Washington, D.C., 1973 see <https://files.eric.ed.gov/fulltext/EDo81600.pdf>). This listing was not based on any scientific data or listing criteria, as for most of the species included in Appendices I and II at that time. However, the massive spotted cats fur trade was one of the very reasons for devising and signature of CITES. At that time the leopard, like other spotted cats, was heavily harvested for the fur trade. In 1968 and 1969, 9,556 and 7,934 leopard skins respectively were imported into the United States of America alone (Paradiso, 1972) and in the 1960's 50,000 leopard skins were estimated to be exported annually from East Africa alone for the fur trade (Anonymous, 1964).

In view of the concern of a number of Parties that such transfers could lead to an upsurge of the commercial trade in leopard skins, the above-mentioned countries, which were not promoting a re- opening of such trade, accepted, as a compromise, to replace their proposals by a Resolution on the trade in leopard skins. The purpose of the Resolution was not to open commercial trade in an Appendix-I species contrary to Article III of the Convention but only to simplify the procedures provided for by that Article, in particular regarding non-detriment findings for non-commercial trade.

In adopting Resolution Conf. 4.13, the Conference of the Parties recognized that “the killing of specimens of leopard may be sanctioned by countries of export in defence of life and property and to enhance the survival of the species, and that the leopard is in no way endangered in Botswana, Kenya, Malawi, Mozambique, the United Republic of Tanzania, Zambia or Zimbabwe”. It recognized also “the overwhelming desire of the Parties that the commercial market for leopard skins should not be reopened”. Hence, leopard remained to this day on Appendix I.

Before any Party may issue a permit to allow export of specimens of species in Appendix I or II, its Scientific Authority must be satisfied and advise that the proposed export will not be detrimental to the survival of the species (the so-called 'non-detriment finding' in [Article III, paragraph 2 \(a\)](#), and [Article IV, paragraph 2 \(a\)](#), of the Convention). The setting of an export quota by a Party may meet this requirement by establishing the maximum number of specimens of a species that may be exported over the course of a year without having a detrimental effect on its survival. The responsibility for establishing quotas thus lies with each individual Party (unless they have been set by the Conference of the Parties as is the case for leopard).

CITES Resolution Conf. 4.13 was revised several times at subsequent CoP meetings by the following Resolutions: Conf. 5.13 (1985), Conf. 6.9 (1987), Conf. 7.7 (1989), Conf. 8.10 (1991), Conf. 8.10 (Rev.) (1994), Conf. 10.14 (1997), Conf. 10.14 (Rev. CoP12) (2002), Conf. 10.14 (Rev. CoP13) (2004), Conf. 10.14 (Rev. CoP14) (2007), and lastly by Resolution Conf. 10.14 (Rev. CoP16) (2013) currently in force.

Importantly with a quota established by the Conference of the Parties the making of an NDF is unnecessary and redundant as the quota itself serves the purposes of the provisions of the Convention.

For South Africa, CITES CoP 7 (1989) approved an export quota of 50 leopard hunting trophies and skins for personal use. This was subsequently increased to 75 at CoP8 (1992) and to 150 at CoP13 (2004).

### 5.2.2. THE INVALID AND UNNECESSARY 2015 LEOPARD NON-DETRIMENT FINDING (NDF)

Despite the fact that a Leopard NDF was not necessary and required under CITES, as explained above, in 2015 a NDF was produced by a series of individuals of which over 70 % were individuals affiliated to NGOs who are opposed to or may not support leopard trophy hunting or the sustainable use or legal trade of leopards or leopard products.

[https://www.environment.gov.za/sites/default/files/reports/scientificauthority\\_nondetrimetnalfindings\\_leopard\\_pantherapardus\\_may2015.pdf](https://www.environment.gov.za/sites/default/files/reports/scientificauthority_nondetrimetnalfindings_leopard_pantherapardus_may2015.pdf)

The key stakeholders including communities, associations, and individuals who are either directly involved in the management and hunting of leopards or own/control all the land where leopard hunting takes place and appropriately more than 60% of the suitable leopard habitat in South Africa, were excluded from direct participation in the 2015 leopard NDF.

The quality of information used in the 2015 Leopard NDF to estimate leopard abundance and trend in national leopard populations was defined by the participants as Anecdotal (not necessarily true or reliable, or is based on personal accounts rather than facts or research). It was furthermore stated that estimates of the size of the national leopard population vary so widely as to make them meaningless.

Scientific information must NEVER be misrepresented in order to fuel the infodemic of false information concerning the perceived endangered status of leopards in South Africa. Claims that trophy hunting is a primary cause, that places the long-term viability of the Leopard population within South Africa at risk, is in PHASA's professional opinion, a blatant misrepresentation of the facts.

This is particularly true in light of the fact that since 2013 the South African Authorities and most of the authors of that NDF were informed and were starting to gathering data on the severe illegal trade in Leopard skins fuelled by the Nazareth Baptist "Shembe" Church and yet this threat, probably the most severe one for leopard in South Africa and in the whole continent, was blatantly ignored in the 2015 NDF.

Surveys of this illegal trade suggest as many as 17,240–18,760 illegal Leopard skins are used by members of the Shembe Church for religious regalia and may be replaced on average around 8 years due to wear. The yearly replacement rate is of about 900 skins per year. A program to replace authentic skins with faux ones has been initiated in 2013 by the NGO Panthera, the same that stubbornly insisted for limitations of trophy hunting and age limitations on leopard. (Balme 2018).

It is therefore illogic, biased and counterproductive for leopard conservation that instead of disrupting through law enforcement actions a blatant illegal trade in skins, several action has been taken to stop or limiting a legal regulated activity as sport hunting that on average accounted for the offtake of 40 leopards in the 3 years preceding the zero quota established in 2016 due to the 2015 NDF.

In fact, sport hunting of leopards has effectively been closed in South Africa since 2016 largely because of the negative result of the 2015 leopard NDF.

The negative NDF published in May 2015 concerning *Panthera pardus* (leopard) was conducted in accordance with the non-prescriptive CITES NDF checklist (<https://www.cites.org/sites/default/files/eng/cop/11/info/03.pdf>), where scores ranging from 1 (lowest risk) to 5 (highest risk) are assigned to 26 different questions. Many of the questions are subjective and the scoring system is incorrectly weighted. Moreover, the authors of the leopard NDF ignored most of the guidelines included in that document as also highlighted in this brief analysis of the 2015 NDF.

**Question 1. Life history category; Low reproductive rate, long lived – 3**

Elephant and Rhinoceros fit the life history category of being long lived with low reproductive rates and would also receive a 3 score. Mature female leopards have the ability to produce multiple offspring, with an annual fecundity value of 1.41. Leopards have a higher reproductive rate than most of African antelope species where reproductive females have the capability of producing only a single offspring per year provided conditions are optimal. Research has shown that since fewer males are required to maintain the same levels of reproduction, leopards are resilient to disturbance if the prime reproductive female life-stage remains intact (Crookes, et al., 1998, Gaona, et al., 1998)

It could be argued that that a High reproductive rate, long lived with a score of 1 would be appropriate for leopard.

**Question 2. Ecological adaptability; Generalist - 4**

Leopards are widely distributed, is the only felid to occur Naturally In all the biomes found in South Arica and costume the greatest diversity of prey so a score of 1, for ecological adaptation is also appropriate.

**Question 3. Dispersal efficiency; Medium – 3**

Leopards have the greatest dispersal efficiency of all large felids so a good dispersal efficiency with a score of 2 could be argued.

**Question 4. Interaction with humans; Sensitive -4**

Leopards can live very close to humans also in urban areas as demonstrated by a leopard caught in July 2019 in the outskirts of Johannesburg <https://www.timeslive.co.za/news/south-africa/2019-07-23-leopard-caught-roaming-the-streets-of-benoni/> and are considered Pests and killed as damage causing animals by livestock farmers so the Pest category with a score of 2 could be more appropriate.

**Question 5. National distribution; Widespread, fragmented in country - 2**

Leopards are the most widespread of all felids in South Africa but because they are not contiguous as a result of fragmented habitat in the country the score of 2 is appropriate.

**Question 6. National abundance; Uncertain - 5**

Leopards are the most common widespread large felid that exists naturally outside of protected areas so a Common rating with a score of 2 would be more appropriate. To give leopards the highest negative score of 5 because they are difficult to count is not correct.

**Question 7. National population trend; Uncertain - 5**

The reason given for changing the National Red List Status of leopards from Least Concern to a Regional Red list status of Vulnerable in 2016 Is “Genuine change: Continuing decline, “NOT

because they are endangered or threatened with extinction. National population trends of leopards are constantly changing throughout South Africa and vary from; Increasing -1, to Stable -2, to Reduced but-stable-3, Reduced and still decreasing - 4, in different areas and at different times depending on the effectiveness the different leopard management. strategies applied.

There never will be a constant leopard population trend throughout South Africa but this should NOT be used as the reason for the 5 score. A score of 3 - Reduced and still decreasing would be the worst-case scenario for leopards in South Africa.

**Question 8. Quality of information ; Anecdotal - 4**

To state that information used by participants to describe leopard abundance and trend in national population is Anecdotal, therefore not necessarily true or reliable, or is based on personal accounts rather than facts or research is exactly the reason why the validity of this NDF and the value of CITES as an organization that claims to make decisions based on scientific fact is seriously questioned.

**Question 9. Major threats ; Uncertain - 5**

Once again the objectivity and the outcome of this negative NDF report is seriously questioned. This classification of major threats being uncertain -5, is more severe than the ranking of Severe/Irreversible-4.

There is absolutely NO logic to this argument and there is certainly NO point of spending large amounts of money on leopard population research and the implementation of new regulations concerning leopard management in South Africa if we are beyond the point of no return as the major threats to leopards are considered to be greater than Severe and Irreversible. This is furthermore a direct contradiction of the report by EWT and SANBI concerning the Red Listing of *Panthera pardus* as Vulnerable in 2016. Table 5 of this report lists “Threats to the Leopard (*Panthera pardus*) ranked in order of severity from 1 to 9 with corresponding evidence (based on IUCN threat categories, with regional context). EXTINCTION is the logical classification that is more negative than Severe and Irreversible. The classification of Limited/Reversible - 2 for current threats to leopard populations in South Africa would be appropriate.

**Question 10, Illegal off-take or trade; Uncertain - 5**

Once again there will always be uncertainty concerning criminal activity. Loaded questions have little or no place in scientific research and should be excluded.

**Question 11. Management history; Management harvest; ongoing but informal - 2**

Also subjective to interpretation. Trophy hunting of leopards in South has a well-documented management history and adaptive management processes are ongoing. A rating of managed harvest. With adaptive framework - 1, would be appropriate.

**Question 12. Management plan or equivalent; No approved plan: informal unplanned management-4**

CITES and TOPS regulations have been designed and implemented as Management plans for the relevant species. Do we therefore all agree that CITES and TOPS have no role to play in approved national/state/. provincial management plans that achieves a score of 2 ?

**Question 13. Aim of harvest regime in management planning; Maximize economic yield -3.**

Rural African people are best motivated to conserve leopards on their land when the sustainable use of this renewable natural resource, gives greater socio-economic rewards than other land use options. PHASA makes no excuse for maximizing economic yield from responsible leopard hunting. The legal trade of wildlife and wildlife products, is a powerful and legitimate means for transformed land to become economically viable with a reduction of poverty, increased job creation and economic growth in rural areas. Maximizing economic yield from the responsible and sustainable harvesting of leopards outside protected areas should receive the most favourable score - 1.

**Question 14. Quotas; Market-driven quota(s), arbitrary quota(s), or no quota - 4**

This question is with regard to CITES quotas for the international trade and export of legally hunted trophies. CITES has nothing to do with domestic harvest or trade in leopards that is prohibited in South Africa. It is not possible to control illegal trade or the removal of Damage Causing Animals (DCA =that cause substantial loss to livestock or wild animals) through a quota system as these cases are always reactionary. Livestock owners have the right to protect their property as and when it happens, and this cannot be predetermined or planned through a quota system but should be mitigated through a well devised plan of incentives to increase tolerance towards leopard. To claim that CITES leopard quotas for South Africa are arbitrary, non-existent or set according to international market demand is NOT a correct statement of fact. Ongoing quotas: “cautious” national or local-2 is considered to be the most appropriate answer to this question.

**Question 15. Harvesting in Protected Areas; None - 4**

No hunting is permitted in Protected Areas in order to provide all Animals in protected areas maximum protection from human utilization so the scoring system is simply NOT correct. No legal harvest of leopards is allowed in Protected Areas in order to lower the risk of harvest so a score of 1 would be correct. This is one of the many examples where the authors of the 2015 NDF have simply not read or blatantly ignored the CITES NDF Checklist.

**Question 16. Harvesting in areas with strong resource High – 1 tenure or ownership;**

This is correct assessment in terms of land ownership. Landholders who carry the cost of conserving leopards have no resource tenure or ownership of leopards on this land.

**Question 17. Harvesting in areas with open access; None - 1**

Here the scoring system is correct.

**Question 18. Confidence in harvest management; Low conference -3**

This is considered to be a fair classification. Landholders are denied the opportunity to take full responsibly for the management of leopard populations on their land.

**Question 19. Methods used to monitor the harvest ; National monitoring of exports - 4**

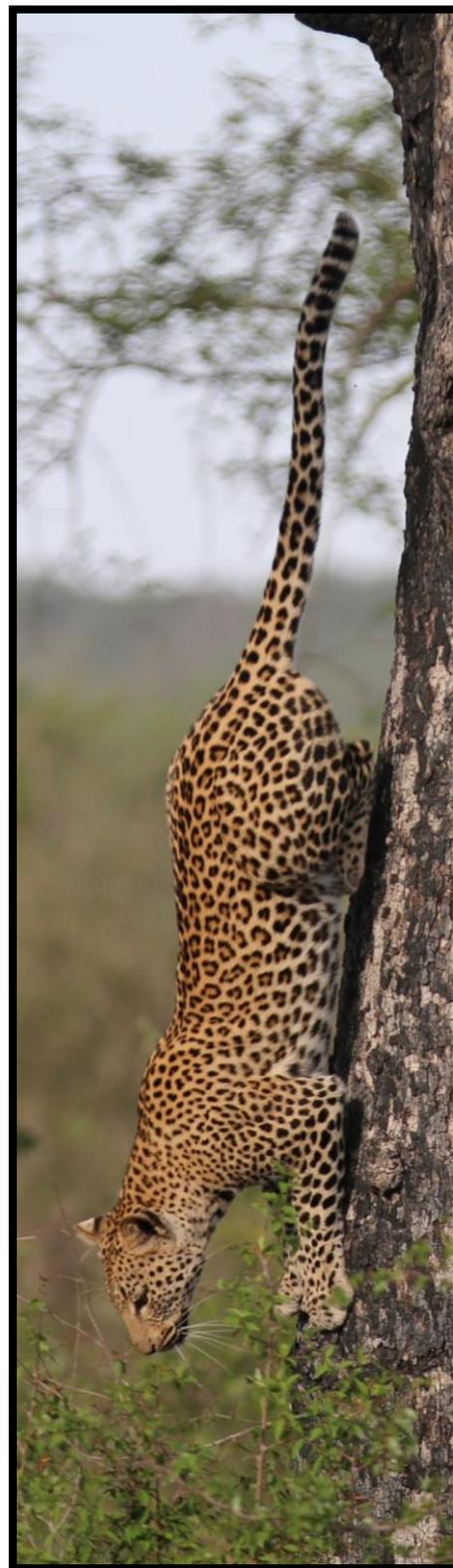
CITES tags for the hunting of leopards are strictly controlled and exports are monitored. These are not the principle methods used to monitor the effects of the leopard harvest, so this answer is not correct. Direct population estimates have always been used to monitor the effects of harvest in South Africa resulting in a score of -1.

**Question 20. Confidence in harvest monitoring; low confidence - 3**

There is a high confidence in the monitoring of animal exports controlled by CITES quotas in South Africa -1.

**Question 21. Utilization compared to other threats ; Unknown; - 5**

This classification of unknown with the most detrimental rating -5 is totally unacceptable. Landholders are most likely to tolerate leopards living on their land when the socio-economic return from the sustainable harvest of that population is greater than their socio-economic cost. Responsible trophy hunting is the most valuable tool available to achieve this objective and is certainly more beneficial than the killing of DCA leopards and poaching or illegal trade. Beneficial - 1 is the appropriate answer.



**Question 22. Incentives for species conservation; Low - 3**

Responsible trophy hunting is the most valuable tool available to achieve sustainable leopard conservation on private or community owned land where 70% of the trophy fee is often paid to the landholder. Conversely removal of the value of leopard to the landholders and they are regarded as valueless vermin and often destroyed. Responsible international trophy hunting provides the Highest Incentive for Leopard conservation in remote rural areas;- 1.

**Question 23. Incentives for habitat conservation; None - 4**

Responsible trophy hunting is the most valuable tool available to achieve sustained habitat conservation sustainable for leopard in our remote rural areas therefore providing the highest incentives -1.

**Question 24. Proportion strictly protected; 5-15%. - 2.**

This result - 2 is scientifically correct confirms the concerns regarding Question 15. Where harvesting is legally excluded in Protected areas yet was scored the negative result - 4.

**Question 25. Effectiveness of strict protection measures; Medium confidence; -2**

This answer is correct in relation to Protected Areas such as Kruger National Park but is not considered correct for the estimated 60% of leopard habitat found outside of Protected Areas where there is No confidence in the Effectiveness of strict protection measures.

**Question 26. Regulation of harvest effort; None - 4**

The finding that restrictive regulations have no effect in preventing overuse confirms that the implementation of more restrictive regulations will also have NO positive impact on leopard management and conservation.

If the scores utilized in our brief analyse would have been used the 2015 NDF would have resulted in a non-detrimental conclusion. This exercise shows that the quality of information available and the interpretation of subjective questions with an incorrect or inconsistent scoring system, can cause varying results for an NDF. According to the participants of the 2015 NDF the quality of the information available to describe abundance and trend in the regional leopard population is Anecdotal (not necessarily true or reliable, or is based on personal accounts rather than facts or research)

Recreational Hunters who pay good money to hunt leopards, Professional Hunters who earn their living from managing this renewable natural resource, Community and private landholders who live with leopard and carry the cost of having leopards on their land and have vast local knowledge, where not included as direct participants in this NDF. These most important stakeholders would have given a vastly different NDF assessment to those affiliated to NGO's such as EWT, Panthera, Cape Leopard Trust, and probably TRAFFIC,

who are either directly opposed to trophy hunting, or may not be in support of the sustainable hunting of leopards, yet comprised over 70% of the participants.

Importantly Swanepoel et al. 2015 estimated a population of 1752 leopards in the Waterberg District Municipality (49 726 km<sup>2</sup>) in the Limpopo Province (125,754 km<sup>2</sup>). These data were not taken into consideration in the 2015 NDF despite the abovementioned paper was available before the NDF was drafted.

It is clear that representatives of rural communities, recreational hunters, professional hunters and game ranchers with vast local knowledge, not only question the need for a leopard NDF in the first place but especially the restrictions that the same has ignited in the following years whereby a zero quota for leopard hunting was enforced in 2016 and 2017.

The summary report on the NDF made by the Scientific Authority of 31 MARCH 2017 for NDFs published for public input in May 2015 concerning *Panthera pardus* (leopard) states; “Legal local and international trade in live animals and the export of hunting trophies at present poses a high risk to the survival of this species in South Africa.”

TOPS regulations concerning the hunting of leopard are to become more restrictive, and trophy hunting of leopards has effectively been closed in South Africa since 2016.

The Trophy hunting of leopards in South Africa will only be considered once a positive growth in leopard populations can be scientifically proven.

**The necessity for a South African leopard NDF and the validity of the 2015 NDF for leopards, is seriously questioned.**

### **2.3. Hunting Restrictions**

Prior to 2016 Leopards were classified by the IUCN Red List as a species of Least Concern, therefore regarded as a species that have widespread populations with NO need for conservation interventions or protection measures such as CITES or TOPS regulations.

The IUCN National Red List status for Leopard (2004)-Least Concern, has been leapfrogged over the Near Threatened status, to the Regional Red List status (2016) of Vulnerable, meaning they are now threatened with extinction. Should this be true the CITES listing of Leopards as an Appendix 1 species for over 40 years has FAILED in its objective of preventing a decline in leopard populations through the strict control of international trade in this species.

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

The reason given for changing the Red List Status of leopards from Least Concern to Vulnerable in 2016 is the perceived “Genuine change: Continuing decline”, and NOT because they are now endangered or threatened with extinction.

Evidence provided by Swanepoel et al. 2014, and many others show that leopards in South Africa have a low risk of extinction. The Regional Red List status for leopard (2016) of vulnerable is not correct as they are NOT threatened with extinction.

Current trophy harvest levels have little impact on population persistence. Poaching and retaliatory killing caused by human-leopard conflict, are the greatest contributing factors to any possible decline in leopard populations. (Swanepoel et al. 2014).

The average annual number of leopards removed by trophy hunting in South Africa during the period 2002 to 2005 was 46.5 individuals (Swanepoel et al. 2014). This represented 60.7% of South Africa’s annual CITES Quota at that time of 75 animals. The annual CITES quota for leopard was increased to 150 animals in 2004. During the period between 2005 and 2013 only 73 leopards were exported annually, mostly as hunting trophies (CITES Trade Database, UNEP World Conservation Monitoring Centre, Cambridge, UK).

An annual average trophy export of 73 leopards represents 48.7% of the CITES quota of 150 leopards, 2.6% of the lowest estimated population size of 2,813 Leopards and 0.63% of the highest estimated population size of 11632 leopards in South Africa.

Importantly it is not clear whether export permits issued, or actual offtakes were used in these figures. It is crucial to note that due to the time associated with trophy preparation and export, CITES trade data do not accurately reflect offtake on a year to year basis. As such, trophies reported in international trade are not necessarily from specimens harvested in the same year they are exported as international trade may be from harvests in many different hunting seasons which can date back several years.

Therefore export data such as the one reported in Sinovas et al (2016) are of little use in hunting and species monitoring, and of even less use in NDFs.

When actual offtakes are taken into consideration and according to the Department of Environmental Affairs statistics as presented to PHASA conventions, the following number of leopards were legally harvested by hunting clients in South Africa in the three years preceding the zero-quota established in 2016:

2013	42
2014	37
2015	36

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

The last year quota was allocated (2015), leopard were taken in the following provinces:

Kwa-Zulu Natal	2
Limpopo	27
Mpumalanga	5
North West	2
<b>TOTAL</b>	<b>36</b>

Offtakes shall be prioritized in guiding management decisions and monitoring and not export permits issued. Therefore a robust hunting monitoring system is needed.

Furthermore it is important to note that, shockingly, the offtakes reported above were not used in the 2015 NDF.

The draft norms and standards for the management and monitoring of the hunting of leopards in South Africa for Trophy Hunting prepared in 2017 proposes a maximum annual sustainable harvest rate of 3.6% of the estimated population.

This threshold is taken from Caro et al. (2008) where models and applications for tourist hunting in Tanzania were discussed. The scenario depicted for leopard implied that male leopards defend territories that overlap those of two to three female territories, but they show no paternal care. Incoming males commit infanticide if they take over the territory of the current male. Harem size was set at 2.5 in the leopard scenario. The maximum sustainable quota under this scenario was 3.8% of the population. However, due to the fact that at that time approximately 30% of the leopards killed in Tanzania were supposed to be females a 30% incidental take of adult females was added and sustainable offtake was reduced to 3.6%.

The situation depicted by Caro although correct and pragmatic at that time is now outdated due to the various hunting regulations enacted by Tanzania after that study, from 2010 onwards, that enforced a male only provision for leopard and a minimum length of 1.30 meters for male leopard to limit offtakes to adult males above 4-5 years of age ( All trophies are measured and these records informs management decisions) (Games and Severre 2002).

Furthermore the situation in Tanzania is completely different from South Africa in terms of land tenure whereby land is State owned in Tanzania and mostly privately owned in South Africa.

The proposed 3.6% would equate to a sustainable trophy hunting quota of 101 leopards at the lower estimated leopard population of 2813 animals and a higher end annual trophy hunting quota of 409 leopards, based on a population of 11 362 leopards.

The annual highest number of trophy leopards ever hunted in South Africa is 80 specimens. This is 21% below the recommended sustainable leopard trophy hunting off take calculated at 3.6% of the lowest estimated leopard population of 2813 individuals.

Non-human related annual mortalities for leopards in protected areas are estimated by Swanepoel et al (in press) to be 9% - adult males, 15% - adult females, 18% - sub adult males, 7% - sub adult females and 67% for juveniles.

Dispersals caused primarily as result of leopard populations exceeding the carrying capacity of their habitat are estimated to be 47% - subadult males, 14% - subadult females and 5% for adults. (Swanepoel et al. 2014).

Actions directed to decrease poaching and conflict related killing of leopard along with incentives for rural people to conserve leopards will be far more effective than restricting trophy harvest in securing the long-term viability of South African Leopards. (Swanepoel et al. 2014).”

This is clearly the way to go.

The claim that unsustainable trophy hunting is a primary cause, that places the long-term viability of the Leopard population within South Africa at risk, is in PHASA’s professional opinion, a blatant misrepresentation of the facts.

Table 5 of 2016 Regional Red List of Mammals by SANBI and EWT lists the threats to leopard in South Africa ranked in order of severity with corresponding evidence. The most important threat is the illegal lethal control of damage causing leopards. This is listed as an increasing trend because of increased hostility towards large carnivores by game farmers. The illegal trade in leopard skins for cultural or religious purposes is listed as the second most important increasing threat with the unsustainable legal trophy hunting listed as the third but decreasing threat.

The Trophy hunting of leopards in South Africa has effectively been closed since 2016 with the excuse of allowing leopard populations to recover and to allow time to introduce stricter hunting controls. Hunting of leopards will only be reopened in areas where a stable or positive growth in leopard populations can be scientifically proven. This is a most unfortunate state of affairs because: -

- Sport hunting offtakes of an average of 38.33 leopards per year (2013-2015) represents only 1.36 % of the lowest estimated population size of 2,813.
- The closing of leopard sport hunting in South Africa is the classic example where the precautionary principle has NOT been interpreted or applied correctly as this

will not allow leopard populations to recover but will cause an accelerated decline of leopard populations outside of protected areas.

- CITES criteria, unclear rules and regulations have been manipulated to effectively close legal leopard hunting in South Africa.
- Sport hunting is NOT the cause of a possible declining leopard population.
- The killing of damage causing leopards has increased since 2016 because the total economic loss associated with leopards that now have no economic value, increases landholder's hostility towards leopards.
- The closing of any legal harvest or trade in leopards and their products will result in an increased illegal trade and criminalize rural people who are trying to earn an honest living and protect their property.
- Draft Norms and Standards shall be improved and evaluate to use body length in lieu of aging as a way to limit the harvest to adult males.
- Ageing of leopard is extremely difficult in the field and the dewlap, taken as one of the main characteristics to age a leopard can develop in certain individuals and not in others. Moreover ageing of leopard is not an adaptive management approach but rather a prescriptive management approach. Furthermore, pooling together ageing and quotas is not a proper management approach as one should exclude the other (Packer 2011).
- South Africa has, since 2015 and despite its claims, abandoned adaptive management in favour of protectionist and prescriptive management for leopard hunting. At the same time retaliatory killing increased and the illegal trade in skins by religious groups continued unnoticed and unpunished. Any serious conservationist would not tolerate this situation.

“Trophy hunting, when well-managed, can be an important tool for the conservation of species and habitats through the provision of financial incentives, especially when revenues are invested back into conservation and when benefits are shared equitably with local communities (e.g. Lindsey, et al., 2007; Dickson, et al., 2009; UNEP-WCMC, 2013; IUCN, 2016), and it has similarly been argued that trophy hunting can foster tolerance towards leopards. Questionnaire surveys have suggested that the attitudes of landowners to leopards is better than for other predator species which cannot be hunted, such as cheetah and wild dogs, and that game ranchers are more tolerant of leopards than livestock farmers” (Leopard Quota Review 2018).

The closing of trophy hunting of leopards in South Africa is NOT addressing the most important causes of a possible declining leopard population and will actually intensify landholders hostility towards leopards. This action will NOT allow leopard populations to recover but will accelerate the wasteful destruction of leopards and increase the rate of decline of leopard populations throughout the country.

Scientific evidence should be interpreted correctly and used wisely in order to:

- Achieve our Strategic Objective where Leopards are positively managed and conserved rather than negatively protected.
- Introduce regulations that facilitate the constitutional right of our people to utilize renewable natural resources, including leopards, sustainably for our socio-economic and environmental benefits.

The irony is that our South African Scientific Authority and DEFF have sufficient positive scientific evidence to justify retaining our annual CITES leopard quota of 150 to the international community, yet our regulatory authorities use negative evidence and anecdotal information to impose a Zero leopard quota on ourselves.

The cause of this inconsistency needs to be identified and rectified.

The corruption and double standards that has become synonymous with CITES, and certain Governments who have been “captured” and are under the influence of animal rights activists has been a serious CITES concern for many years. Whilst the integrity of our officials is not under question, we have most certainly allowed over regulation and manipulation associated with CITES and TOPS, poor administration caused by the 9 plus 1 regulatory structures and the negative influences of animal rights activists, to effectively close down the economic value of leopard conservation for landholders and responsible hunters in South Africa.

Finally the assumption in the 2015 NDF and in the 2018 Quota review that no effective incentives for habitat conservation arise from the harvest of leopards is simply misinformed and false.

The great majority of suitable habitat for leopard in South Africa is in private hunting areas and in areas devoted to game ranching. It is the value attached to wildlife that maintains the majority of habitat in South Africa not misinformed and biased NGOs that hold ZERO responsibility and accountability in wildlife management and conservation.

### 5.3. SOCIO-ECONOMIC INFORMATION WITH REGARD TO LEOPARD MANAGEMENT AND CONSERVATION IN SOUTH AFRICA.

### 5.3.1. ECONOMIC VALUE OF TROPHY LEOPARD HUNTING IN SOUTH AFRICA.

During the period between 2005 and 2016 an average of 73 leopards were exported annually, mostly as hunting trophies from South Africa. (CITES Trade Database, UNEP World Conservation Monitoring Centre, Cambridge, UK).

The total estimated financial value of leopard trophy exports from SADC (the Southern African Development Community) over the period 2005 – 2014 was USD 9 964 702 (USD1520/leopard trophy) (Sinovas et al., 2016). Approximately 14% of these trophies originated in South Africa (USD1 395 058). Leopard is also the most valuable trophy exported from SADC, followed by elephant (USD1303) and hippopotamus (USD759) (Sinovas, et al., 2016).

A recent survey of South African Hunting Outfitters who are now forced to take their leopard hunting clients to neighboring countries shows that a 10 to 14 day leopard hunting safari currently sells for between US \$ 32 000.00 and \$ 75 000.00. These high end clients will almost always hunt other animals whilst on a leopard safari with an estimated value of between \$ 5000.00 to \$ 20 000.00. Leopard hunters seldom go on safari alone and are typically accompanied by non hunting companions or planes game hunting friends who would spend an additional \$ 5 000.00 to \$ 10 000.00

The direct hunting income generated from a single leopard hunt would range from \$ 35 000.00 to \$ 95000.00. This excludes additional cost such as taxidermy, air fares and time spent by hunting tourists, visiting the popular tourism destinations such as Cape Town and Kruger National Park estimated to be a minimum of \$ 10 000.00

Assuming the average value of an individual leopard trophy hunt in South Africa to be US \$ 45 000.00. At an exchange rate of 1 US \$ to R 18.50 this equates to **R 832 500.00**

73 leopard hunts per annum equates to a minimum value of US \$ 3 285 000,00 or R 60 772 500,00 at an exchange rate of 1 US \$ to R 18.50.

At the upper end value of \$ 95 000.00 per leopard hunt this value increases to \$ 6 935 000.00 or R 128 297 500.00.

### 5.3.2. ECONOMIC VALUE LOST THROUGH CLOSING TROPHY LEOPARD HUNTING IN SOUTH AFRICA FROM 2016 TO 2020.

In calculating the minimum cost of closing trophy leopard hunting in South Africa the lower end estimated value of \$ 45 000.00 per Leopard and Plains Game hunt is used and equates to R 832 500.00 at an exchange rate of one \$ to R 18.50.

This represents an annual loss of income from 73 leopard hunts to be R 60 772 500.00  
The closing of trophy leopard hunting for four years has cost our South African hunting industry estimated minimum direct loss in income of **R 243 090 000.00(A)**

### 5.3.3. ECONOMIC COST OF LEOPARD POPULATIONS TO GAME RANCHERS AND RURAL COMMUNITIES IN SOUTH AFRICA

In order for a game rancher to harvest 1 trophy leopard a year at the so called maximum rate of 3.6% of a population, 28 leopards would need to be maintained on this property. ( Draft Norms and Standards for the Management and Monitoring of the Hunting of Leopards in South Africa for Trophy Hunting Purposes 2017)

The estimated annual number of prey species caught per leopard in the Save Valley Conservancy was 0.50 kudu, 0.35 sable, 0.26 waterbuck, 0.32 wildebeest, 14.99 impala, 0.24 warthog and 17.2% other ( Funston et al. 2013 ). These figures would represent the lowest possible estimate of animals caught by a leopard in one year as they are based on the dietary requirements of leopard and no allowance was made for wastage or kills lost to scavengers.

The current local South African hunting value of these species of Kudu =R 6 000.00, Sable = R 15 000.00, Waterbuck = R 10 000.00, Wildebeest = R 3 500.00, Impala = R 1750.00 and Warthog = R 1000.00, were used to calculate the annual value of prey species consumed per leopard.

Using the above game values the estimated hunting value of prey species killed annually per leopard based on their dietary requirements. with no allowance made for wastage or kills lost to scavengers is R 45 054.00. The on the hoof farm value for game consumed is estimated to be 75% of hunting value (R 45 054.00 x 75%) = R 33 940,50

An alternative method of calculating the economic cost of leopards would be to value the meat consumed or wasted by that population.

A daily a ration of 1 to 1.2 kg of meat is considered sufficient to maintain captive leopards where the feast or famine regime is eliminated and wastage of meat is minimized.

The meat consumption of wild leopards varies largely, depending on availability of food, body size, and breeding status. Larger males leopards consume more meat than single females but possibly less than a female with cubs.

A 30 kg impala carcass ( dressing at 60% = 18 kg meat ) would seldom last a mature leopard more than 3 to 4 days. This equates to the daily consumption of between 4.5 to 6 kg of

meat per adult leopard directly after a kill but leopards may go hungry for 2 to to 3 days before making the next kill.

For the purpose of this exercise an estimate of 3.2 kg of meat is taken as the average daily quantity of meat consumed by a wild leopard and 17,2 % of prey taken such as porcupine, hyrax, monkey and jackal have no commercial meat value.

Assuming an on farm carcass value of R 25.00 per kg for typical prey species such as Impala with a 60% meat content = R 41.66 per kg meat. Should leopards in the wild consume an average of 3.2 kg of meat per day, the annual value of meat consumed would be (R 41.66 x 3.2kg x 365 days) - (17,2 % being prey with no commercial meat value) R 40 342.00 per leopard.

Many landholders living with leopard will tell you that a leopard will take an average of an impala size prey per week. At an on-farm value for impala at R 850.00 this equates to a value of (R 850.00 x 52) = R44 200.00

The estimated **minimum annual cost of carrying a single leopard** in South Africa is calculated as the average between the estimated value of prey at R 33 940.50 the estimated value of meat consumed of R 40 342.00 and the value of an impala per week at R 44 200.00 = R 39 494.17 rounded off to **R 39 500.00**

According to the Draft Norms and Standards for the Management and Monitoring of the Hunting of Leopards in South Africa for Trophy Hunting Purposes a maximum annual off take of 3.6% of the leopard population is permitted. This equates to only hunting a single leopard per year out of a stable or increasing population of 28 leopards. The further requirement is that only one male leopard that is seven years or older may be hunted per leopard hunting zone per year out of a population that is scientifically proven to be growing or stable over a 3 year period.

Packer et al. (2009) showed that the harvesting of male leopards that are 7 years or older had little impact on population persistence, regardless of extent of off take. The seven year age minimum requirement for trophy hunted male leopards dramatically reduces the risk of over harvesting despite uncertainties in population sizes.

Trophy hunters prefer to hunt older male animals so the aim of harvesting male leopards with a seven year minimum age is not a problem.

Scientific evidence supports the fact that the hunting of male leopards that are a minimum age of 7 years, has little or no negative impact on leopard conservation despite any uncertainties in leopard population dynamics. ( Packer et al 2009 ).

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

The desire to restrict the trophy hunting of leopards to mature males is understood as this is the the most important leopard management requirement that ensures hunting is responsible and not detrimental for the conservation of leopards.

Research carried out in the Save Valley Conservancy showed a 50% increase in the leopard population over a 4 year period when hunting was restricted to males only, without a 7 year age restriction and the harvest rate was between 5 and 10% of the population ( Funston et el. 2013 )

The need for the additional restrictions of an annual maximum quota calculated at 3.6% of a scientifically proven growing or stable leopard population, where only one leopard may be hunted per arbitrary leopard hunting zone per year is therefore NOT necessary for the conservation of leopards where the criteria of hunting only mature males has been introduced.

The average total income for a combined Leopard and Plains Game hunt in South Africa is estimated to be \$ 45 000.00 or R 832 500.00

A leopard hunting quota restriction based on 3.6% of population size equates to an annual off take of one leopard from a population 28 leopards. The direct minimum annual cost of maintenance for the population of **28 leopards** is calculated to be  $(28 \times R 39 500.00) = R 1 106 000.00$  or a loss of R 273 337.00.

A 5% annual harvest equates to an off take of one leopard, valued at R 832 500.00. from a population of 20 leopards costing  $(20 \times R 39 500.00) = R 790 000.00$ .

A 5% annual leopard off take shows a marginal positive economic return of R 42 500.00

At a 10% annual harvest rate a positive economic return of  $\{R 832 500.00 - (10 \times R 39 500.00)\} = R 437 500.00$  may be achievable.

During the period between 2005 and 2016 only 73 leopards were exported from South Africa annually.

The estimated minimum annual cost to the wildlife industry for providing common prey species to a population of leopards required to sustain an annual harvest of 73 leopards would be  $(73 \times R 1 105 837.00) = R 80 726 101.00$ .

This represents a direct minimum cost in loss of game from leopard predation, to the wildlife industry over the 4 years of the current leopard trophy hunting ban in South Africa to be **R 322 904 404.00 (B)**

The estimated minimum loss to the South African wildlife economy, caused by imposing a zero leopard quota for 4 years is calculated to be the value of hunts lost plus the value of prey animals killed by leopard ( A +B ) = **R 565 994 404.00**

Figure 13 – Leopard over a kill



#### 5.3.4. ESTIMATED COST OF THE SOUTH AFRICAN LEOPARD MONITORING PROJECT.

Leopard hunting quotas are now adjusted annually based on population trend data generated by the South African Leopard Monitoring Project. Hunting will be excluded from any areas where leopard populations are in decline, and hunting will not be allowed in areas where scientifically robust data on leopard population trends are absent. Hunting zones eligible for a quota are thus those where scientifically robust population trend data indicate increasing or stable leopard populations (i.e. no statistically significant difference in observed leopard density over time). (SANBI 2018)

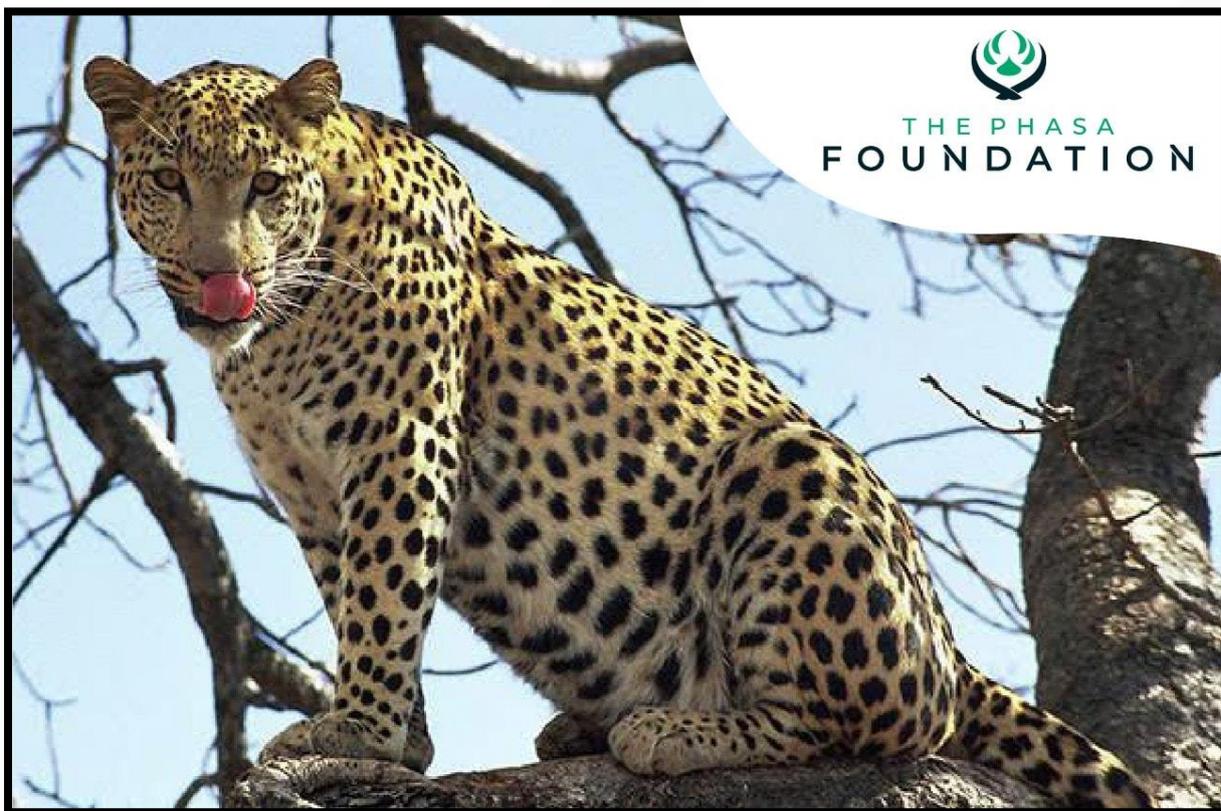
What is the estimated annual cost of the South African Leopard Monitoring Project, - to count leopard populations in the 81 leopard hunting zones (LHZ) in South Africa over the initial 3 year period.

5.3.4.1. Capital cost of camera traps, vehicles and other equipment required?

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

5.3.4.2. Management and running costs are estimated to be R 35 000.00 per 10000 ha within each of the 81, LHZs and a minimum of two counts are required over a 3-year period. Running costs of the leopard monitoring project will be a minimum of  $R\ 35\ 000.00 \times 2 \times 81 = R\ 5\ 670\ 000.00$ .

5.3.4.3. The estimated minimum loss to the South African wildlife economy, caused by imposing a zero leopard quota for a further 3 years whilst the leopard monitoring project is in progress is calculated to be the value of 73 trophy hunts lost plus the value of prey animals killed by leopard in 3 years = **R 424 495 803.00**



### 5.3.5. SOCIO-ECONOMIC IMPACT OF A ZERO TROPHY LEOPARD HUNTING QUOTA SINCE 2016 TO POVERTY ALLEVIATION, JOB CREATION AND FOOD SECURITY.

The estimated direct cost of a zero leopard hunting quota for a further 3 years will cost the wildlife economy R 990 490 207.00 from the time the zero trophy hunting quota was introduced in 2016.

Who is responsible for and who pays for the unacceptable loss of a Billion Rand to our rural wildlife economy?

What is the impact of throwing away of a Billion Rand on poverty alleviation and job creation in our poor rural communities?

In terms of food security Leopards consume a lower end estimate of 3.2 kg of meat per day whereas humans need between 40 to 50 gm of protein daily. The average leopard consumes the daily protein requirements for 64 to 80 people. The minimum estimated South African leopard population of 2 813 leopards will consume the protein requirements of 200 000 people.

#### 5.3.6. IMPACT OF A ZERO TROPHY LEOPARD HUNTING ON THE TRADITIONAL, CULTURAL AND CONSTITUTIONAL RIGHTS OF SOUTH AFRICAN PEOPLE.

The impact of effectively closing down legal leopard hunting in South Africa is against the traditional, cultural and constitutional rights of our people. We not only have the right to protect our lives , property and livelihood hood against dangerous predators but we have the right to utilize renewable natural resources including leopards responsibly and sustainably for the socio-economic and environmental benefit of our people.

#### 5.4. RECOMMENDATIONS FROM PHASA - REVIEW EXISTING POLICIES, LEGISLATION AND PRACTICES RELATING TO THE MANAGEMENT AND HANDLING, BREEDING, HUNTING AND TRADE OF LEOPARD.

##### 5.4.1. REVIEW EXISTING POLICIES, LEGISLATION

The most concerning aspect of the 2017 Norms and Standards for the Management and Monitoring of the Hunting of Leopards in South Africa for Trophy Hunting Purposes, is that the economic and practical factors concerning the implementation of these regulations have not been fully considered. PHASA has managed to raise seed funding through donations and has agreed to become positively involved in starting the Leopard Monitoring Project but the questions regarding the economic sustainability of this process needs to be addressed.

To summarize:

- Trophy leopard hunting has been effectively closed for 4 years in order to allow alleged declining leopard populations to recover and to introduce stricter hunting regulations.
- Alleged declining leopard populations are NOT as a result of trophy hunting but are caused mainly by the unregulated trade in skins for religious purposes and by human-leopard conflict.
- The 4 year zero leopard hunting quota, has cost the wildlife economy an estimated R 566 Million. (Value of  $73 \times 4 = 292$  leopard hunts lost plus the value of prey animals killed by leopard ( A + B ) = **R 565 994 404.00**)
- According to the current norms and standards for leopard trophy hunting a maximum annual leopard hunting quota calculated at 3.6% of a scientifically proven growing or stable leopard population over a 3 year period, could be allowed per designated leopard hunting block. This equates to the possible annual harvest of one 7 year old male from a stable or growing population of 28 leopards.
- At a maximum leopard population density of 10 leopards per 100 square km (1 leopard per 1000 ha) a hunting area of 28 000 ha would be required to harvest one leopard trophy per year. This increases to 56 000 ha should the population density be 5 leopards per 100 square km (1 leopard per 2000 ha).
- The estimated annual direct cost to landholders for the prey species consumed by the 28 leopards, from which one 7 year male may be hunted per year has been calculated to be **R 1 106 000.00**

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

- The estimated income is for a successful trophy leopard hunt, should a CITES tag be allowed after positive NDF report and public participation processes are completed, is **R 832 500.00**
- At a 3,6% harvest an annual loss of **R 273 500.00** per trophy leopard hunted can be expected.
- In order to possibly be allowed the privilege to hunt one leopard per year at a significant economic loss, landholders must incur no income from leopards over the 3 year monitoring program at a further direct loss of R 4,2 million. This is clearly an unaffordable situation.
- According to current leopard regulations the average game rancher and our rural communities who carry the huge cost of conserving leopards will not derive an economic benefit from the sustainable use of this renewable natural resource.
- Government Gazette Notice 749 of 2016 deals with the **NORMS AND STANDARDS FOR THE MANAGEMENT OF DAMAGE-CAUSING ANIMALS IN SOUTH AFRICA.** “ damage-causing animal “ includes animals that cause substantial loss to livestock or wild animals.

The enforcement of laws and regulations, designed to negatively protect leopards are not socially or economically sustainable for the rural people who carry the cost of conserving leopards on over 60% of suitable leopard habitat found outside our protected areas in South Africa.

The implementation of a Zero CITES quota with no legal hunting of leopards in South Africa is an unnecessary **NEGATIVE** action that is having a:

- **NEGATIVE** impact on the conservation of our leopards in South Africa as landholders tolerance for leopards is reduced.
- **NEGATIVE** impact on our wildlife economy, poverty alleviation and job creation to the current value of a Billion Rand.
- **NEGATIVE** impact on food security for over 200 000 rural people at the lower end estimated leopard population.
- **NEGATIVE** impact on our Cultural and Traditional Right to hunt leopard and wear leopard skins with pride and dignity as our African symbol of courage and royalty.

- NEGATIVE impact on our Constitutional Right to positively manage and sustainability utilize renewable natural resources that includes leopards for our socio-economic and environment benefit.

The responsible PHASA members who manage leopard populations outside of parks have the ability, experience and extensive local knowledge to turn the above-mentioned NEGATIVES into POSITIVE actions with POSITIVE results both for sustainable leopard conservation and to transform and grow the wildlife economy.

South Africans are among the world leaders in Wildlife Management with Responsible Trophy and Recreational Hunting having a most significant positive impact on wildlife conservation in our country because of its significant positive contribution to the wildlife economy.

Responsible trophy leopard hunting is beneficial in optimizing economic returns for the benefit of the landholders who carry the cost of having leopards on their property and the conservation of leopards is therefore encouraged. This is acknowledged in the 2018 CITES leopard quota review which states:

“Trophy hunting, when well-managed, can be an important tool for the conservation of species and habitats through the provision of financial incentives, especially when revenues are invested back into conservation and when benefits are shared equitably with local communities (e.g. Lindsey, et al., 2007; Dickson, et al., 2009; UNEP-WCMC, 2013; IUCN, 2016), and it has similarly been argued that trophy hunting can foster tolerance towards leopards. Questionnaire surveys have suggested that the attitudes of landowners to leopards is better than for other predator species which cannot be hunted, such as cheetah and wild dogs, and that game ranchers are more tolerant of leopards than livestock farmers”

The DEA Leopard Quota Review for CITES of 2018 furthermore states the following; “Research has shown that since fewer males are required to maintain the same levels of reproduction, leopards are resilient to disturbance if the prime reproductive female life-stage remains intact (Crookes, et al., 1998, Gaona, et al., 1998), while population models show that hunting of leopard can be sustainable when only male leopard 7 years and older are hunted (Packer, et al., 2011)”

The most important positive management aspect of responsible trophy leopard hunting, that is often not clearly understood by many people who are not directly involved in hunting, is that leopard population growth is stimulated, through the harvesting of surplus mature individuals that are not required for breeding purposes.

Research concerning the management of large carnivores for profitable wildlife based land use carried out in the 344 000 ha Save Valley Conservancy (SVC) in Zimbabwe showed that the sustainable trophy hunting of male leopards only, with no age restriction, at a rate of between 5 and 10% of the leopard population resulted in a net financial benefit to the landholder, irrespective of their abundance levels. (Funston et al. 2013).

During this 4 year research period between 2004 and 2008 the hunting of male leopards only (no 7 year age restriction) at an annual rate of between 5 and 10% of the leopard population resulted in a 50 % growth in the leopard population. With a population of 200 leopards a 5% harvest of males only, showed a marginal positive annual financial return of US \$ 2 500.00. This positive financial impact of leopard trophy hunting (no 7 year age restriction) was significantly increased to US \$ 20 000.00 at a 10% of population harvest. (Funston et al. 2013). A harvesting rate of 3.6 % of the leopard population through trophy hunting is not economically sustainable for landholders.

The above practical research showed the following;

- Sustainable trophy leopard hunting need NOT be restricted to leopard populations that are stable or growing as leopard population can be positively managed to growth through responsible hunting of mature male leopards only, without a 7 year age restriction.
- Sustainable trophy leopard hunting need NOT be limited to males with a minimum age of 7 years.
- Sustainable trophy leopard hunting should NOT be restricted to a maximum quota calculated at 3.6 % of the leopard population as this is not economically sustainable for landholders. In the SVC there was a 50% growth in leopard numbers over 4 years, whilst harvesting males only (without the 7 year age restriction) at a rate between 5 and 10% of the population (Funston et al. 2013)
- The average total income for a combined Leopard and Plains Game hunt in South Africa is estimated to be \$ 45 000.00 or R 832 500.00

A leopard hunting quota restriction based on 3.6% of population size equates to an annual off take of one leopard from a population 28 leopards. The direct minimum cost of maintenance for the population of **28 leopards** is calculated to be  $(28 \times R 39 500.00) =$  **R 1 106 000.00** or a loss of R 273 337.00.

A 5% annual harvest equates to an off take of one leopard, valued at R 832 500.00. from a population of 20 leopards costing  $(20 \times R 39 500.00) =$  R 790 000.00.

A 5% annual leopard off take shows a marginal positive economic return of R 42 500.00

At a 10% annual harvest rate a positive economic return of {R 832 500.00 - (10 x R 39 500.00)} = R 437 500.00 may be achievable.

Despite being among the world leaders in this field, hunters and wildlife managers in South Africa are currently denied the right to proactively stimulate leopard conservation, population growth and production with increased sustainable leopard off takes through responsible trophy hunting.

The opportunity for landholders and responsible hunters who wish to positively manage and grow leopard populations on their land, through the wise and sustainable use of this renewable natural resource has effectively been prohibited and criminalized in South Africa. This state of affairs is totally unacceptable to PHASA, the International Sustainable Use Coalition including South Africa. It is recommended that the IUCN Specialist Group for Sustainable Use and Livelihoods should be afforded the opportunity to comment on this. The burning need for an enabling legal and regulatory environment that facilitates positive management, conservation, production and increased sustainable utilization of leopards rather than those that are designed to negatively protect the species cannot be over emphasized.

Legal and regulatory reform concerning wildlife management outside of protected areas is the most important single issue that needs to be resolved by the advisory committee to the minister who is requested to refer to the submission made by PHASA to the Wildlife Forum Meeting of 14 September 2018. TOWARDS MEANINGFUL TRANSFORMATION OF THE LEGAL ENVIRONMENT GOVERNING THE WILDLIFE SECTOR IN ORDER TO STIMULATE THE BIODIVERSITY ECONOMY. 14 September 2018.

#### 5.4.2. THE WAY FORWARD

PHASA recommends the following as a way forward for hunting and conservation of leopard in South Africa.

- A) Establish a proper Hunting Monitoring protocol for leopard in South Africa through Hunting Return Forms
- B) Provincial and Central Government shall maintain records of offtakes and measurement of harvested leopards. Proper hunting monitoring shall not rely on CITES export permits but on reliable offtake statistics.

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

- C) Establish an incentive-based system to phase out Damage Control Animals. Landowners shall be incentives to conserve and not to destroy leopard. Sport Hunting is the best scheme to incentivize landowners. The zero quota has incentivized illegal activities to the detriment of legal regulated hunting.
- D) Promote serious law enforcement actions to neutralize illegal trade in leopard skins, taking into account the cultural and religious traditions of South Africa.
- E) Use body length and not age as a system to control harvest of adult males.
- F) Discard the 3.6% threshold for quota allocation.
- G) Promote transparent monitoring of leopard populations through standard and user-friendly protocols.

## 6. PART D: LIONS

**The African lion, Panthera Leo, an indigenous species – is not facing extinction, or “an unprecedented crisis” from either hunting, captive breeding or the trade in lion bone in South Africa. (Molewa, 2018) Regrettably, the current public discourse is awash with heavily slanted and often misrepresented information. This is harmful to government’s ongoing conservation efforts, and also to those of organisations in the wildlife and game industry that are working with us to ensure the survival of lion species in the wild. (Molewa, 2018) The whole world needs to understand that, in Africa, if a wildlife asset pays, it stays. If it doesn’t it is replaced with something that does pay. (Thomson R, 2018)**

The African Lion is one of the flagship species of Africa for research, tourism and trophy hunting. The presence of lion in an area contributes as an indicator of its natural integrity. The lion is also a primary attractor for tourism and one of Africa’s “Big Five” trophy animals. (Funston, 2015) The Scientific Authority established through the National Environmental Management: Biodiversity Act (NEMBA) and in line with the suggestions received from the Regional Conservation Strategy for the African Lion in Eastern and Southern Africa recommended the development of a Biodiversity Management Plan (BMP) for the African Lion. (Funston, 2015)

In South Africa lions are currently referenced as either wild, managed wild or captive bred.

### Current lion management categories in South Africa

“wild lions” are lions that fulfil a role in biodiversity processes and are largely unmanaged. They exist only in formally proclaimed national parks and game reserves, where vital rates and lion demographics are not actively manipulated

“managed wild lions” include all lions that have been re-introduced into smaller fenced reserves (<1000km<sup>2</sup>) and are managed to limit population growth and maintain genetic diversity. Managers actively manipulate some vital rates and demographics, including prey base supplementation.

“captive lion” means any lion that is kept in a controlled environment

**Currently none of the managed wild populations in the 45 smaller fenced reserves or any of the captive lions were listed by the IUCN as viable or potentially viable population. (Funston, 2015)**

Nationally, **South Africa was the only African country with growth in every population, all of which were fenced;** most were re-established over the past two decades and quickly

reached saturation. (Bauer. H, 2015) The Majority of South African reserves are already at full carrying capacity and the possibility of expansion is limited. **Madikwe GR culled its lion population down from over 110 individuals in 2009, to just 40 individuals in 2012** (Hofmeyr, 2012). Even without this extreme case, if we take the 700 lions in small reserves today and continue with current management practices, **there would be an excess of about 90 lions per year available for translocation, or to be euthanised in South Africa each year.** (Miller, 2014)

The Professional Hunters' Association of South Africa (PHASA) has a long history of industry collaboration with National government, governmental departments and officials. As an industry we are committed to enhancing and securing wildlife throughout South Africa by safeguarding the long-term survival of wildlife for the benefit of future generations. This requires innovative ideas and intrinsic cohesion from within the entire wildlife community throughout South Africa and Southern Africa.

PHASA realises the crucial role of scientific based conservation research and the implementation of holistic biodiversity conservation for the long-term survival and genetic integrity of the entire lion population. It is our custodial duty to develop key protocol and implementation methodology that ensure the viability of lion populations throughout South Africa and possibly Africa. This can only be achieved via the cooperative involvement of all industry stakeholders, strong governmental support and scientific fact-based research outcomes.

PHASA is embracing its responsibility as gazetted by the late Minister of Environmental Affairs, Dr Edna Molewa, who published in the Biodiversity Management Plan (BMP) for the Lion (*Panthera Leo*) in South Africa, under the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 Of 2004); That PHASA along with DEFF, DALARD Provinces, Academic institutions and other industry partners must **“Assess the management of the captive lion population”** by **“Improving the conservation status of lions within the broader conservation context”**.

PHASA has developed the Lion - Biodiversity Conservation Strategy (LBCS) is a living document that incorporates South Africa's legal framework, management plans and recommendations made by the Scientific Authority of South Africa (SASA) for the African Lion (*Panthera leo*) in South Africa. These include, but are not limited to:

- National Environmental Management: Biodiversity Act (NEMBA), 2004
- Threatened or Protected Species Regulations (TOPS).
- Biodiversity Management Plan (BMP) for the African Lion (*Panthera leo*) in South Africa
- Non-Detriment Finding (NDF) for Panther leo (African lion)

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

- The International Union for the Conservation of Nature (IUCN) Red List of Threatened Species
- Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES)

The Lion - Biodiversity Conservation Strategy (LBCS) document provides a brief outline and framework regarding the role PHASA envisages for wild, managed wild and ranched lions. Whilst identifying the pivotal role ranched lions can fulfil in attaining the objectives of the Biodiversity Management Plan (BMP) for the Lion (*Panthera Leo*). In close collaboration with the local government, industry stakeholders and top tier research institutions, PHASA is confident it will be able to fulfil its task and secure the outcomes objectives of the BMP. To improve the conservation status of lions within a broader conservation context, considering the respective role of wild, managed wild and captive populations, and encourage the development of opportunities for economic and social benefits from responsibly managed wild, managed wild ranched lion populations.

The BMP was jointly developed by Dr Paul Funston from Panthera, the Council for Scientific and Industrial Research (CSIR) and the Department of Environmental Affairs (DEA) as part of a comprehensive management plan for lion. However, since the BMP was published for implementation only recently (in December 2015), its effectiveness cannot yet be assessed. Local level management plans are however effectively implemented. (Scientific Authority, 2018)

On a national scale however, there is **no budget or capacity to fund** a national coordinated system that can be implemented for all re-introduced lion populations. Thus, budget and legal restrictions are hampering the scaling up of local management to enhance a larger management framework for lion conservation. (Scientific Authority, 2018)

The NEMBA: Biodiversity Management Plan for the African Lion (*Panthera leo*) in South Africa (2015) identifies captive lions as a separate population of lions. However, it does not specifically address many of the challenges facing the captive lion industry. (van der Vyver, 2017)

LBCS is intended to provide meaningful solutions and strategies of assisting in the long-term conservation strategies and assisting the development and growth of the green economy for the benefit of rural people and wildlife.

### 6.1. OVERVIEW OF THE LION – BIODIVERSITY CONSERVATION STRATEGY

PHASA is tasked in the BMP to: **Improve the conservation status of lions within a broader conservation context and assess the management of the captive lion population.** The Lion – Biodiversity Conservation Strategy (LBCS) is a PHASA initiative, in conjunction with the BMP, where lions in private ownership could form an integral part of lion conservation not only in South Africa but potentially the rest of Africa.



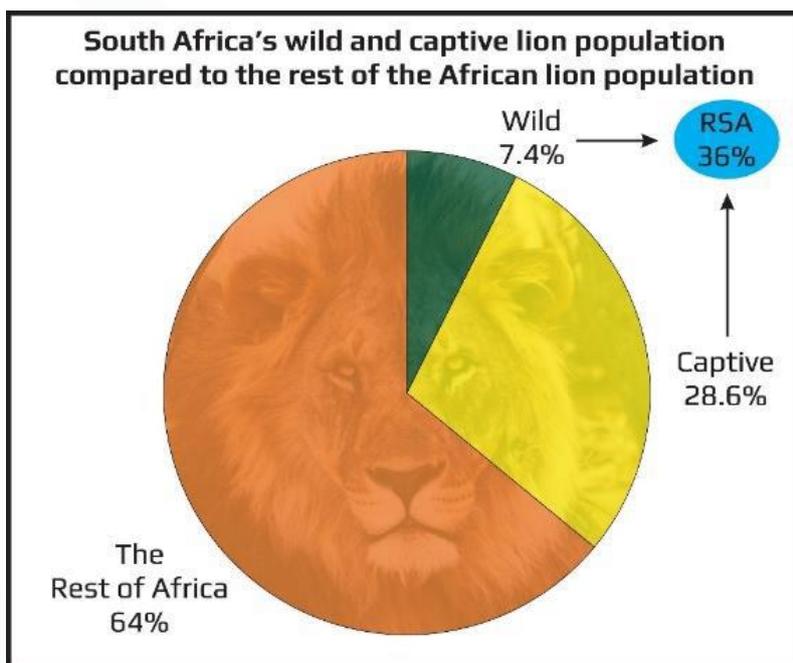
In accordance with the BMP PHASA was tasked with improving the conservation status of lions within a broader conservation context and assessing the management of the captive lion population. The intended outcome of the LBCS is to assist in ascertaining the vision of the BMP for South Africa's entire lion population.

#### Vision of the BMP for lions:

*Through the existence of stable, viable and ecologically functional populations of wild and managed wild lions, along with well-managed captive populations that have minimal negative conservation impacts, lions will provide key opportunities for biodiversity conservation, economic development, social benefits and improved management capacity.*

#### Vision for the Lion – Biodiversity Conservation Strategy:

To develop meaningful solutions for wild, wild managed and ranched lions, in accordance to the Biodiversity Management Plan (BMP) for the African Lion (*Panthera leo*).



With a combined estimated lion population of 36%, South Africa's lions play a crucial role in African lion conservation on a global scale considering South Africa geographically represents just over 4% of Africa's land mass. Leading carnivore specialists often overlook the significant contribution Captive Bred Lions (CBL) make to the conservation of the species, representing over 79.5% of the South African and 28.6% of the entire African lion population.

Currently, the management styles for lions vary greatly across all three categories, with little cohesion or support. Each lion category is operating in its own individual island under different conditions, management styles and with different objectives. The BMP's vision of developing a well-managed captive lion population alongside wild and managed wild lion populations is not coming to fruition.

Similarly, with CBL's distinct management and operational practices exist. The management, infrastructure and levels of human intervention vary between facilities. Despite, the existence of different management styles all lions born in controlled environments are listed as "captive-bred" in accordance to the legal framework.

The captive lion population includes released lions, free-roaming lions, lion breeding operations, lion hunting, and tourism facilities that are recognised as commercial exhibition facilities which includes lion interaction experiences, lion research facilities, zoos and lion parks, and the entertainment industry (circuses, animals trained for the film industry etc.). (van der Vyver, 2017)

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

PHASA has identified the need to separate lions born in controlled environments into two distinct categories and differentiate between, management styles, operational practices, levels of human intervention and conservation objectives.

Table 2 – Proposed lion categories for lions born in controlled environments

<b>“tamed lions”</b>	<p>are lions that have had continuous direct human interaction and include:</p> <ul style="list-style-type: none"> <li>(a) Bottle raising of cubs</li> <li>(b) Cub petting</li> <li>(c) Lion walks and film making</li> <li>(d) Zoos, circuses, lion parks and sanctuaries</li> <li>(e) Education and research</li> </ul> <p><b>These lions may not be hunted</b></p>
<b>“ranch ed lions”</b>	<p>are lions of any origin (excluding tamed lions) that can fend for themselves in an extensive or semi-extensive system which are managed for sustainable utilisation purpose. These lions form part of the Lion – Biodiversity Conservation Strategy plan for lions in South Africa.</p>

Most of the media concern surrounding the breeding of lions in controlled environments revolve around welfare concerns and active human interaction. The general public mainly associates CBL with bottle raised lions that are used for activities such as cub petting, volunteerism and lion walks. Although PHASA and its members understand the important role, that “tamed lions” can play in terms of ecotourism, education and scientific research.

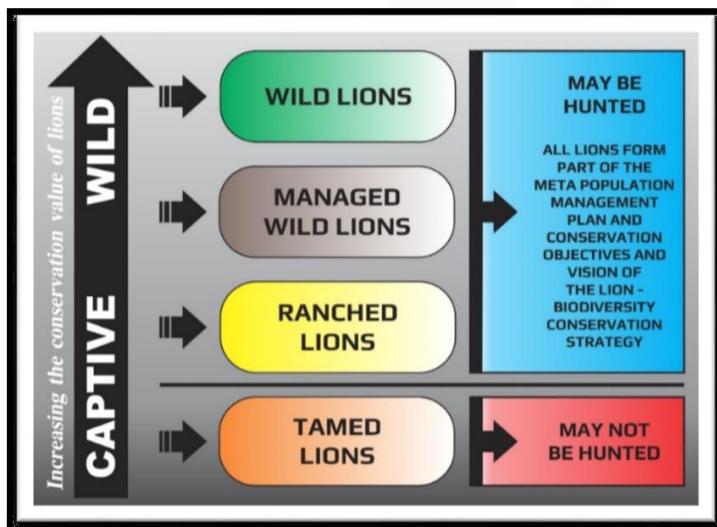
**PHASA and its members concur with this sentiment and have thus taken a stance not to hunt “tamed lions”.**

For lion conservation to be successful all three pillars that secure ecological sustainable development need to be taken into consideration and incorporated. Promoting the conservation of natural resources, economic development and social development all play an active role in securing ecological sustainability. **It is for these specific reasons that PHASA suggested the development of a separate category for “ranch ed lions” with the ultimate goal of improving the conservation status of lions within the broader conservation context.**

Ranch ed lions are lions of any origin (excluding tamed lions) that can fend for themselves in an extensive or semi-extensive system which are managed for sustainable utilisation purpose. These lions form part of the Lion – Biodiversity Conservation Strategy (LBCS) plan for lions in South Africa.

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

Ranched lions originated from controlled environments where minimal human interaction occurs. They must be genetically sound and healthy individuals and can make a positive contribution to a metapopulation management plan.



A clear distinction is made between tamed and ranched lions and PHASA only supports the hunting of lions that contribute to the long-term conservation objectives of the BMP and contribute to the vision and objectives of the LBCS.

The U.S. FWS withdrew the countrywide enhancement findings in March 2018. U.S. FWS will for now make findings for

trophy imports on an application-by-application (or case-by-case) basis. This provides a greater opportunity for the hunter to demonstrate his/her personal hunting experience and subsequent trophy import contributes to enhancement of that species. (Cogliano, 2018)

The Enhancement Findings will now evaluate and monitor the individual hunter, concession or hunting area, Governments and other management entities contribute to enhancement. (Cogliano, 2018)

For lions born in controlled environments where there is limited, biological benefits that could be contributed by the captive populations to the wild population, the enhancement requirements would most likely need to be based on financial benefits that provide a clear and measurable benefit to wild population through support of in-situ conservation efforts or research activities, either in the country where the trophy was taken or elsewhere in the species' natural range. While there may be several ways to provide this support, the one that seems most probably is a percentage of the procedures received by the farm/ranch where the lion was hunted or a set amount per lion being contributed to an appropriate conservation effort that can document how the money is being spent and what benefits are being derived from the funding. However, the benefits provided by the funding must be documented and it must be shown that the funding provides a significant benefit to wild lions, either in South Africa or elsewhere in the lion's natural range. It would not be acceptable for a minimal amount of money going to a substandard project to qualify as enhancement. (Van Norman, 2017)

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

Another aspect of this paradigm is that there must be a way to track the money from the farm/ranch to the in-situ conservation program and accounting for any "administrative" costs. (Van Norman, 2017)

### LION CONSERVATION LEVY

It is the intention for PHASA to implement a "Lion Conservation Levy" that will be administered through the PHASA Foundation (The Fund). This Levy will be determined annually in collaboration with key stakeholders. This will either be a minimum amount (e.g. \$ 2,000) or a percentage of the hunt (10%) whichever is the higher contribution to the "Lion Conservation Levy" fee.

The Fund which was established in 2003, is a registered, non-profit company and a Memorandum of Incorporation governs its management. The Fund is managed by a Board of Directors and is subject to an annual audit (copies of the Fund's financials are available on request).

The Fund is income tax-exempt and issues Section 18(a) certificates in respect of donations received, which is tax deductible for the benefit of the outfitter.



Public Benefit Organisation # 930 035 681

Non-Profit Company # 2003 / 000 015 / 08

Since its inception, the Fund has raised more than R20 million to support important projects and organisations, with a dedicated focus on the following three cornerstones, which are:

1. Research
2. Conservation
3. Livelihoods

The Fund, provides the ideal framework and credibility for receiving, monitoring and distributing the Lion Conservation Levy, ensuring that the funds generated are equitably distributed.

Figure 14 – LBCS fund generation “Lion Conservation Levy”

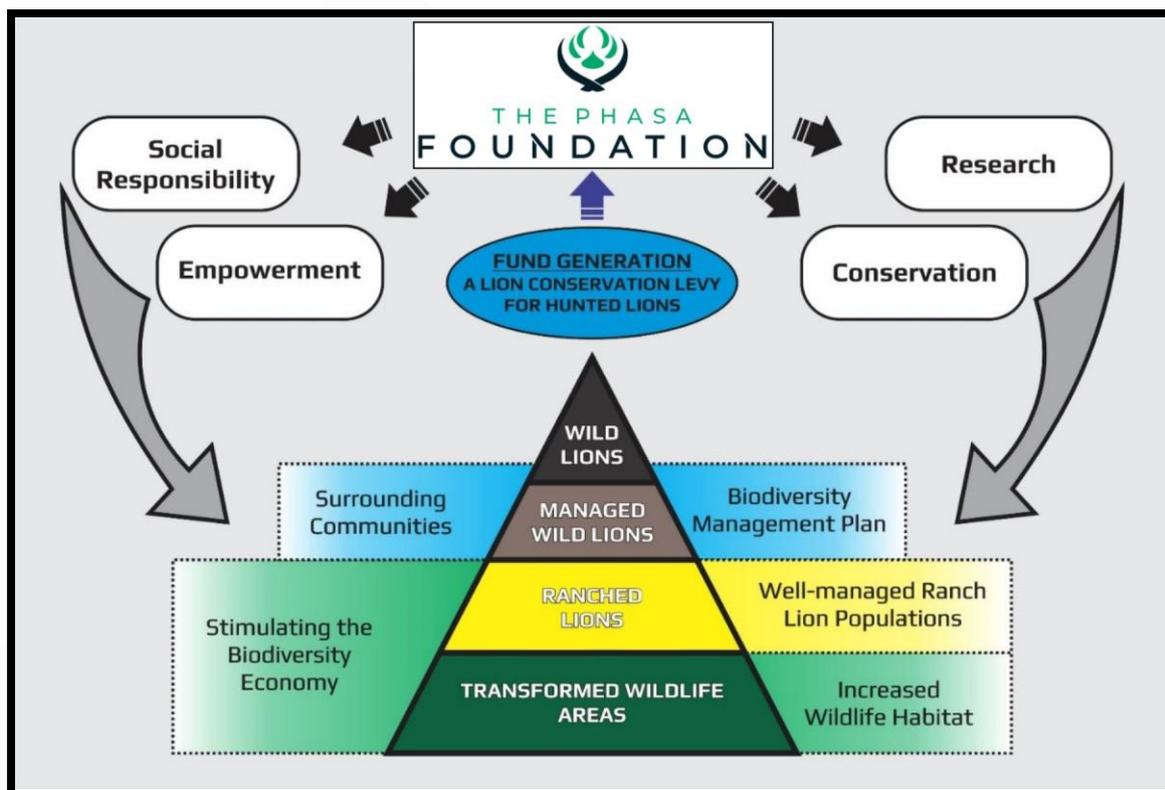


Figure 14, illustrates a flow diagram of how the income generated from the hunting of wild, managed wild and ranched lions, through the Lion Conservation Levy will be distributed and monitored via the Fund.

Funds will be channelled to fulfil the roles of social responsibility and empowerment to particular communities surrounding wild and managed wild reserves, ensuring that they received equitable benefit from the hunting of lions. They will also be used for support, mentorship and partnership programs between emerging game ranchers or communities with a vested interest in wildlife conservation and PHASA members. This support and mentorship must be object based and ultimately stimulate the growth of the biodiversity economy.

Research and conservation funds will be specifically made available to assist with the current shortfall and budgetary constraints preventing the implementation of the BMP, where possible. A concerted contribution will be made to achieving the tasks as outlined in the BMP, whereby PHASA must assist in establishing a well-managed Ranched lion population that improves the conservation status of lions within a broader conservation context. Furthermore, conservation objectives should aim at assisting in identifying opportunities for increased wildlife habitat and possible implementation strategies for lion and other species conservation.

The LBCS's fund generation plan forms a continuous cycle whilst addressing many of the challenges, threats and opportunities for the sustainable growth of lion populations in South Africa. The lion conservation levy forms the epicentre, surrounding the success of this plan and through the contribution made by wild, managed wild and ranched lions hunts a meaningful strategy can be implemented ensuring real and equitable benefits are derived from lion hunting.

These factors form part of the most important requirements for the individual enhancement findings required by U.S. FWS for the importation of trophies (e.g. lions) into the U.S.A. Contributors to the "Lion Conservation Levy" will be assisted by PHASA in obtaining the required individual enhancement findings.

### 6.2. STRATEGIC OBJECTIVE

The Professional Hunters' Association of South Africa (PHASA) is tasked in the BMP to: **Improve the conservation status of lions within a broader conservation context and assess the management of the captive lion population.** The Lions – Biodiversity Conservation Strategy (LBCS) is PHASA's strategic framework aimed at addressing many of the challenges facing lion conservation in South Africa. Whilst assisting the DEA with the implementation of the BMP for the Lion (*Panthera Leo*) in South Africa.

PHASA is committed to finding meaningful and lasting solutions for the sustainable use of all natural resources, including lions, for the long term benefit of conservation, responsible hunting and future generations.

At the Biodiversity Economy Innovation Conference on the 25th August 2018 the President of South Africa Mr Ramaphosa emphasized that the survival of humanity, depends on the sustainable use of our natural resources. Sustainable maintenance of the biodiversity economy can contribute to our efforts to eradicate poverty and to create economic opportunities for our people. The government support to the biodiversity economy is contributing to market development locally, regionally and internationally. (Ramaphosa, 2018)

The president further elaborated that South Africa is a place where wildlife is in great abundance and our wildlife industry has great exponential growth, but our black people are not involved. We wish to grow the industry from 20 million ha of land mainly in the hands of white farmers and increase it to 30 million ha of land by including black game farmers in the hunting, hospitality and tourism industries. The private sector is needed to play a key role in developing the Biodiversity Economy. (Ramaphosa, 2018)

The vision of the LBCS is: *To develop meaningful solutions for wild, wild managed and ranched lions, in accordance to the Biodiversity Management Plan (BMP) for the African Lion (Panthera leo).*

The objectives of the LBCS is the: **Implementation of the lion conservation “BRASE” plan**

- Biodiversity Conservation
- Research
- Assist with management capacity
- Social Development
- Economic Development

#### 6.2.1. BIODIVERSITY CONSERVATION

Biodiversity richness is one of South Africa’s most important natural assets as it provides goods and services which are vital for human well-being. Rich biological diversity is fundamental to human development and to the well-being of us all. Biodiversity conservation management starts with soil and water, followed by the habitats and lastly the animals - both domestic and wild.

The Convention on Biological Diversity was developed in 1992 with the following objectives:

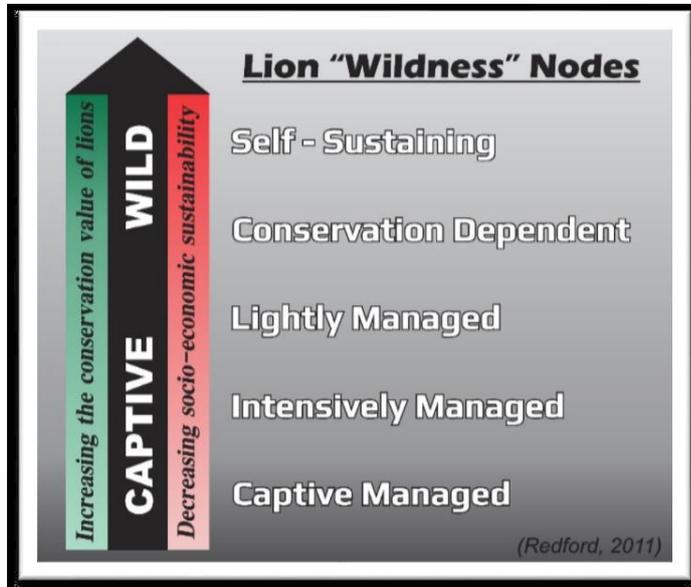
- Conservation of biological diversity
- Sustainable use of all its components - including wild and domestic plants and animals
- Fair and equitable sharing of benefits arising from the utilization of these natural resources.

##### 6.2.1.1. INCREASED WILDLIFE HABITAT

Unlike many other countries in Africa, South Africa is the most developed country in Africa and there is no natural or unpopulated wild habitat left. This places South Africa in a very challenging environment, wildlife species need to compete against many other land use options. For wildlife conservation to succeed, the sustainable economic viability of wildlife utilisation needs to outshine other land uses options. **South Africa’s wildlife model is based primarily around the creation of wealth from the renewable and sustainable utilisation of wildlife and conservation is a most important outcome.**

As discussed, the funding of lion conservation in South Africa is viewed as a current threat to lions. Although our wild and managed wild lions are well protected in national parks and small reserves the cost of maintaining these population is a huge financial burden. The annual management budgets for maintaining lion habitats in 8 small reserves in South Africa, conserving 295 lions is equated to over R 650,000 per lion per year.

It would appear that **not a single one of our National or Provincial Parks in South Africa that provide a sanctuary for lions, are financially self-sustaining or economically viable.** Many parks don't even generate enough income to cover their annual management budgets.



Wildness varies along a spectrum from captive-bred to completely free-roaming. In between, subpopulations may have varying degrees of wildness depending on management intensity, which may render the subpopulation unviable in both the short and long term without continual intervention. (IUCN, Guidelines for using the IUCN Red List categories and Criteria, 2014), (Redford, 2011) & (Taylor, 2016)

South Africa lion populations are all managed with varying management intensities, even Kruger which houses 80% of South Africa's wild lion population is considered one of the most heavily managed reserves in Africa. (Bauer H. C., 2016)

The perceived conservation value of lions gradually increases from captive to wild under each node. However, the economic viability also decreases accordingly. The increasing conservation value of lions comes at a corresponding higher socio-economic cost with increased threat levels (human lion conflict, prey base depletion, poaching, etc.).

Predator management and lion conservation require massive management budgets and the utilisation costs of lions on prey species is immensely costly in particularly in fences or enclosed environments. Similarly, to wildlife competing against other land use options, lions are even more challenging as they compete against themselves. Wildlife production numbers are greatly impacted on by lion population, **levels of predation by lions on 'captive/fenced' populations of prey, such as wildebeest, can drive the prey population towards extinction.** (Funston, 2015) Eight contracepted lions were reintroduced to Madjuma Lion Reserve (15km<sup>2</sup>) in 1996 and immediately caused declines in blue wildebeest, numbers decreased drastically by 60% over a five year period, which ultimately led to the removal of the lions (Hayward MW O. J., 2007) (Power, 2002)

Lions are a huge financial obligation, that require intensive management planning especially in South Africa. The long-term economic feasibility of creating more wildlife

habitat especially for free-roaming lions is not viable. Similarly, unless a conservation area is in excess of 1,000km<sup>2</sup> the IUCN won't recognise the conservation value and will reflect the population as non-viable.

**The unfortunate truth is that ALL of the managed wild lions in South Africa are either not economically viable or viable from an IUCN conservation perspective.**

Lions from controlled environments that are hunted, promote the conservation of wildlife habitat. According to the legal framework, lion hunts must take place on a property of at least a 1,000ha. **This creates vital extra habitat ensuring soil, plant, reptile and mammal conservation of numerous other species not just lions.**

The majority of today's land, used for wildlife by the private sector in South Africa, has been converted from livestock and crop farms due to reasons such as wildlife developed an economic value, wherein the 1900's to 1960's wildlife was of very little value. It has since become more economically viable to keep and use wildlife, for commercial purposes, than livestock. (Cloete PC, 2015) (Van der Merwe, 2017)

Another problem is that many game ranches are too small to be economically self-sufficient. The minimum size varies depending on veld type, but on average, those ranches below 2,500 ha are economically unviable since game populations are not large enough to produce an annual sustainable supply of huntable trophy quality game. (Degeorges, 1997)

Many lion specialists argue that lions born in controlled environments cannot be rehabilitated back into the wild. In one experiment – on a 38 000 hectare game ranch in the Matlabas area – one adult male and four non pregnant adult female, had been released from a controlled environment. Despite all these lions having never killed before; they were never fed; and they have all survived. The lions formed two individual groups and all four lionesses have collectively produced 13 cubs of which 8 have survived. The cubs are now already a year old, all fit, fat and healthy. The adults, too, are in excellent condition. (Thomson R, 2018)

In another study done by Duston et al. their study compared the territorial and hunting behaviour of two captive origin lion prides, whilst monitoring the same behaviour of a wild pride for comparison. Considering that maintaining a territory and being able to hunt are imperative for the success of African lion Panthera leo prides. Their research aimed to determine whether captive origin prides display similar territorial and hunting behaviour to wild lions. Behaviours and locations of two captive-origin prides and one wild pride were collected through direct observation. All prides established territories, and core areas corresponded to resource requirements. **There was no evidence that pride origin affected territorial or hunting behaviour. Captive-origin prides exhibited behaviours that lead us**

**to be optimistic about each pride's ability to establish and defend a territory successfully, and to hunt, following reintroduction.** (Dunston, 2017)

Lions from controlled environments have very little problem with adapting to extensive systems as shown in two separate case studies. The biggest challenge is finding wildlife habitat with sustainable population of ungulates for lions.

#### 6.2.1.2. *REDUCE AND MINIMISE MAJOR THREATS TO LION POPULATION*

As per the legal framework the Scientific Authority have recently released an NDF for lions in January 2018, replacing the previous NDF of 2013. The finding of the assessment was that there are currently no major threats imposed by legal local and international trade on the wild lion populations in South Africa. It is believed that lions from controlled environments potentially serving as a significant buffer to threats facing the wild population by being the primary source of trophy hunting and derived products (SANBI, 2012) (Lindsey P, 2012) (Williams VL, 2015) (Miller S, 2016) (Scientific Authority, 2018).

Is it not coincidental that South Africa was the only country with a growth in every lion population and is also the country with the largest CBL population? The potential impact of CBL hunting on the wider conservation of lions has been largely overlooked. (Hargreaves, 2010) (Lindsey P, 2012). It would also appear that wild lions in South Africa are safe from the body parts trade for as long as CBL are the source of the derivatives. (Funston, 2015) It is of little doubt that lions from controlled environments play a vital role in alleviating pressure on wild lion populations. Furthermore, CBL take the pressure off wild lions as these lions are viewed as easier or softer targets by local poachers, who poison lions to supply the muthi market with body parts. (Loots, 2018) The EWT have compiled statistics of 60 CBL poached (all poisoned) referencing open source media reports from June 2016 – July 2018. The EWT indicated that the current trend of lion poaching is strictly restricted to lion living in controlled environments.

Minor threats include over-utilisation, disease, poaching and conflict with communities around protected areas. (Funston, 2015)

In South Africa lions are exposed to six major viral diseases, with only canine distemper virus being known to have any major influence on them. Most lion populations appear to be exposed to feline immunodeficiency virus. Lions in Kruger National and Hluhluwe-iMfolozi Parks are infected with bovine tuberculosis. Although there may not be consensus yet on its effect, no major consequences have been detected. On-going studies to determine how this exotic disease affects lions are under way. (Funston, 2015)

In mid-December 2015, the lion population of Welgevonden became infected with the Canine Distemper Virus (CDV), only one of the 23 lions survived the outbreak. (Vermaak,

2016) and over 80% of lions in some areas of the KNP are infected by bTB. The clinical signs of infection in lions include respiratory problems, emaciation, lameness and blindness (Keet D.F., 2009) Research demonstrates that inbred Lions are more susceptible to Bovine Tuberculosis and that translocating outbred Lions into the area can mitigate losses (Trinkel M C. D., 2011). However, care must be taken not to introduce new diseases into subpopulations through translocation. An adaptive management framework is thus needed to implement the guidelines developed by LiMF on reserves across the country (Miller S, 2016)

### 6.2.1.3. ASSIST IN MAINTAINING THE GENETIC DIVERSITY OF LION POPULATION

Genetic diversity within a species is a most important consideration with regard to the long-term survival of that species. The greater the number of individuals within a species the greater the genetic diversity of that species. There are an estimated 2,074 wild lions and 8 000 captive lions in South Africa. (Bauer H. C., 2016) (Jones, 2018) Many of the 500 lions found in the smaller reserves are fragmented and genetically compromised as they have been allowed to inbreed and now lack genetic diversity.

The ultimate consequences of frequent close breeding include impoverishment of genetic diversity (Packer C. P., 1991). The Madikwe lion population is genetically compromised yet has been a source to re-establish lion populations in more than 15 reserves (Trinkel M F. P., 2010). Out of the founder population of 11 lions, four females and five males reproduced successfully; two animals died before they reproduced. By the end of 2005, 105 cubs had been born. (Trinkel M F. P., 2010) Given that Madikwe has one of the largest reintroduced populations, and that inbreeding could not be avoided, there are concerns about all small reintroduced populations in South Africa (Slotow, 2009) On a national scale there is **no budget or capacity to fund** a national coordinated system that can be implemented for all re-introduced lion populations. Thus budget and legal restrictions are hampering the scaling up of local management to enhance a larger management framework for lion conservation. (Scientific Authority, 2018)

The Lion Conservation Levy income can through the PHASA Fund be made available to the numerous scientific institutions to help with the genetic research and management of lions in these small reserves, ultimately assisting with the implementation of the BMP.

### 6.2.2. RESEARCH

It has become abundantly clear that ongoing research into wildlife population dynamics, meta population management strategies, disease control, rangeland management options etc. plays a correspondingly more important role associated with increasing human population growth. With export restrictions, such as U.S. FWS Enhancement

requirements, research is an imperative key to show enhancement of the species and conservation.

A major concern in conservation biology is to avoid inbreeding depression in small populations. Inbreeding has been shown to cause loss of fecundity and reduced survival in natural populations. To predict future inbreeding levels, given changes in ecological conditions, data from large outbred populations are needed. (Björklund, 2003)

Research Funding is required firstly to identify suitable lion breeding stock and secondly to implement the Lion Biodiversity Conservation Strategy. The financial and genetic resources that could be sustainably made available from lions managed in controlled environments should NOT be overlooked.

#### 6.2.2.1. SPECIES RESEARCH

High-value animal species such as rhino, buffalo, sable, roan antelope, bontebok and lions are scientifically managed by individual game farmers in South Africa using contemporary and available technology such as DNA testing and monitoring to mitigate against inbreeding, but this research is being ignored. (Dry D. G., 2016) This scientific research also contributes to conservation in South Africa, since the private lion industry does create healthy lion populations. (Van der Merwe, 2017)

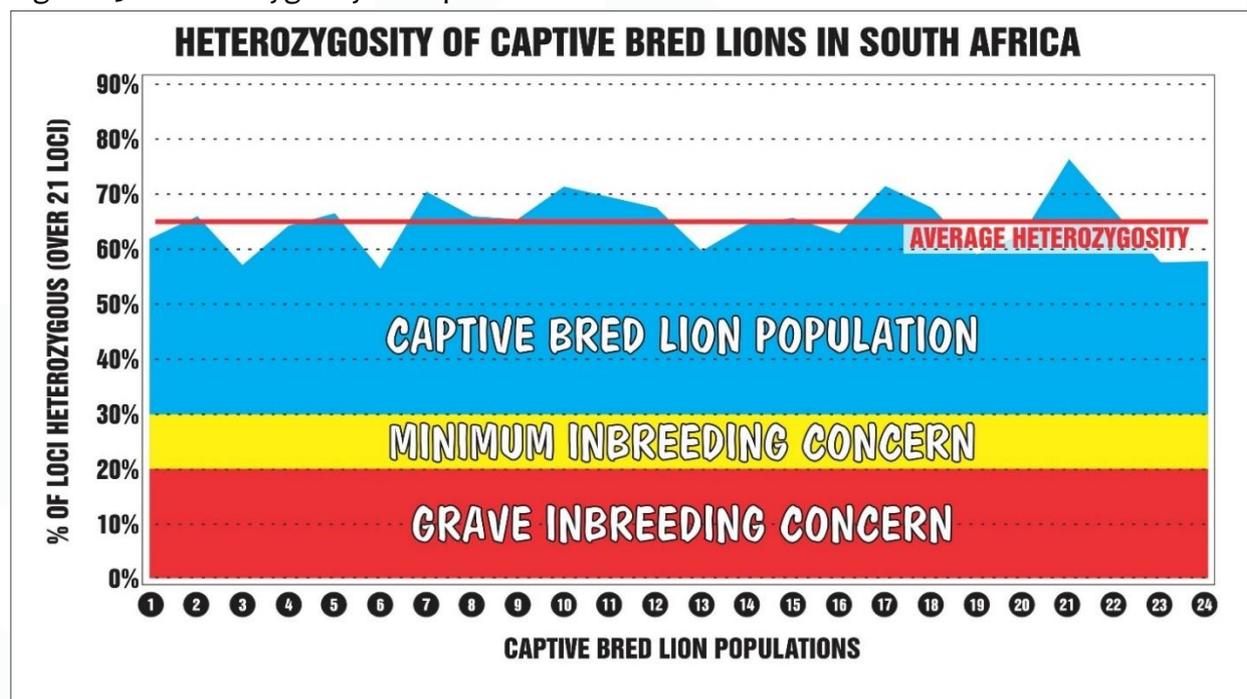
The prevailing view amongst carnivore specialists is that captive-bred lions do not contribute to the conservation of the species, especially for population restoration purposes, since inbreeding is known to occur and thus compromises genetic integrity and provenance. (Slotow, 2009) (Hunter L.) (SANBI, 2012) (Packer C. C., 2013) (Funston, 2015). It is concerning that scientist all sight inbreeding as a concern amongst lions in controlled environments, however no reference is made to any form of scientific research.

A genetic study carried out on one captive lion population and 24 wild and wild managed populations showed that a number of unique alleles were found in the captive population. **This suggests that there may be some genetic diversity in the captive populations that has been lost from the wild populations. This warrants further research into captive populations in South Africa to determine if unique diversity has been preserved in these captive populations and could be restored to the wild populations.** (Miller, 2014)

In November 2016, a study was conducted that evaluated the Allele Frequencies, Heterozygosity and Inbreeding Coefficient of captive populations by lions by Unstel Labs. **The results as indicated in figure 27, show significant genetic variation or heterozygosity of these lions, with no inbreeding concerns amongst any of the 24 individual populations (526) that that were examined.** (Marx, 2016)

This is the biggest individual genetic study ever done of captive lion population and possibly the biggest genetic evaluation of lions ever performed. The South African Predator Association (SAPA) gave Unistel carte blanche with full access to evaluate their entire DNA sampled population. **This study determined that there was no inbreeding concern amongst all 24 lion breeding facilities that were examined, with an average heterozygosity of 63.5% dispelling the myth that captive bred lions are genetically inferior.**

Figure 15 – Heterozygosity of Captive Bred Lions in South Africa



The initial study done by Dr Susan Miller had a sampling base of 401 samples of which 361 amplified and could be used for further analyses. (Susan M. Miller, August 23, 2014) The study done by Unistel Labs had a sample base of 526 lions. If these two studies are to be combined it will presumably be the largest ever genetic research project of such a magnitude for lions.

Table 3 – Comparisons between Dr Susan Miller’s and Unistel Labs Genetic Research

	Dr Susan Miller	Unistel	Total
Sample size (Individual lions)	361	526	887
Populations	24	24	48

Further analysis between the two studies was conducted by Dr Cindy Harper who evaluated the collective results on paper and made the following comments:

**Microsatellite evaluation of ranched lions - comments:**

The combined inbreeding value (Fis) of the small reserves in the paper by Miller *et al* was 0.18 (between -0.24 to 0.21) and the reference population Kruger National Park 0.05.

The inbreeding values calculated for the captive populations provided by Unistel varies from -0.31 to 0.136. Generally, therefore, the individual captive population appears less inbred than the individual small reserves. **The majority captive populations studied also have lower inbreeding values than that of the KNP reference population in Miller's paper.**

Overall heterozygosity of the captive lions 0.65 (Unistel data) that is similar to KNP (0.64 Miller) compared to the small reserves 0.55 (Miller). Heterozygosity provides a measure of diversity of the population, therefore, **the genetic diversity of the captive lion population overall is similar to that of KNP and could conceivably contribute to increasing diversity of the "wild" lion populations.**

However, the data provided is too limited to provide anything further. The genotypes of both sets of data would need to be standardised and the population structure analysed to determine the level of admixture in the captive populations. If provenance will be an important consideration in selecting individuals for setting up new populations or improving the genetic diversity of existing populations then the population structure analysis of the captive lions will need to be done.

One would also need to re-analyse the combined dataset taking into account individual marker characteristics to evaluate further indicators of diversity and identify unique genetic variants in the captive population that may not be present in the "wild" population.

As a caveat to this proposal, the logistics of using captive animals, particularly large felidae, to supplement existing wild populations must be considered in terms of adaptability and social behaviour. Genetics is only a small part of such an endeavour. If the breeding of captive lions is to be done to provide a resource in case wild population numbers reduce further, then the management of these captive populations must be carefully considered and only genetically valuable animals used for breeding in the future, since indiscriminate breeding will lead to surplus lions of low genetic value. Breeding to improve genetic diversity of "wild" lions is not sufficient justification for breeding surplus lions for a commercial lion market.

Similarly, the captive populations may be a source of ancestral diversity and unique genetic material and it would be rash to discard the population without evaluating the genetic data and utilising this potentially valuable resource, especially considering the limitations of the small reserve lions and the potential to use the captive population to re-stock previous ranges throughout Africa.

(Harper, 2018)

### 6.2.3. ASSIST WITH MANAGEMENT CAPACITY

PHASA is tasked in the BMP to: **Improve the conservation status of lions within a broader conservation context and assess the management of the captive lion population.** The Lions – Biodiversity Conservation Strategy (LBCS) is a PHASA initiative, in conjunction with the BMP, where lions in private ownership could form an integral part of lion conservation not only in South Africa but potentially the rest of Africa.

Considering that without government grants and other funding in excess of R2.6 billion (during 2015 and 2016) SANParks would have recorded a financial deficit of over R2 billion. (SANParks, 2016) Similarly, the combined management budgets for 8 of the 45 small reserves require an annual management budget of US\$ 12.7 million (±R179 million) (Packer C. C., 2013). Bearing these huge financial burdens in mind, it starts to become very clear why according to the NDF report, these reserves lack the funding to manage their lion populations effectively and there is **no budget or capacity to fund a national coordinated system** (Scientific Authority, 2018)

#### 6.2.3.1. INDUSTRY COLLABORATION AND CONSERVATION STRATEGIES

South Africa's conservation model is centred around private ownership and implemented through fences; fences play a vital management role especially for wildlife. Well-fenced boundaries to avoid conflict with humans restrict natural migration and recolonization, necessitating managers to manipulate these populations to maintain genetic diversity and regulate population growth rate. (Trinkel M F. P., 2010)

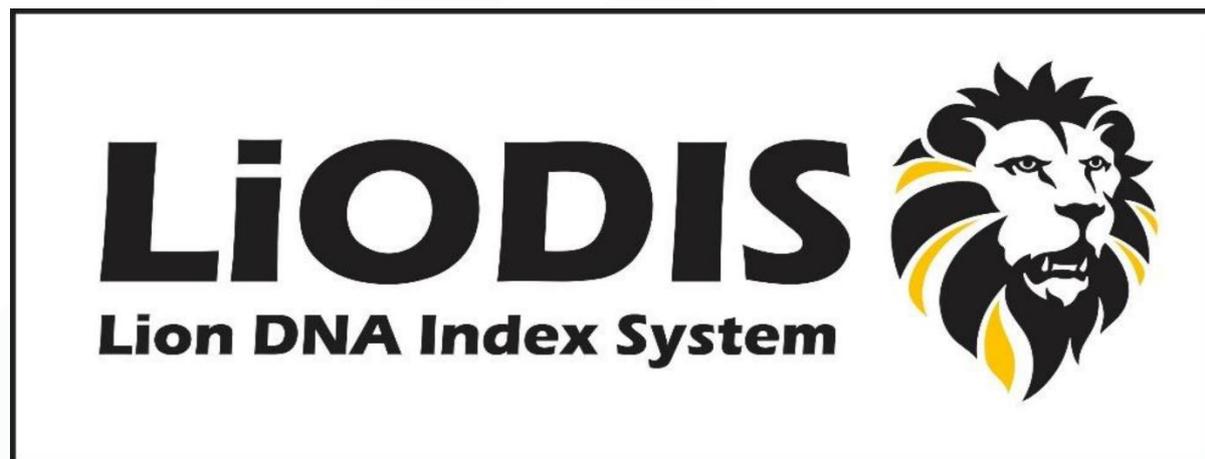
South Africa's conservation model is founded on three important sectors, the public sector / government, private sector / individuals and the free market economy, without this collaboration the three legged stool as described by Peter Flack would topple over. Industry collaboration is vital at all levels, including local, provincial, national and throughout the Southern African region. South Africa has a well laid out BMP but needs support to implement it across all these levels.

#### 6.2.3.2. SUPPORTING THE BIODIVERSITY MANAGEMENT PLAN

PHASA understands the pivotal role the private sector plays in long term conservation goals and objectives. PHASA supports the vision of the BMP and can make positive contributions by assisting in the long term management of ranched lions ensuring minimal negative conservation impacts whilst providing key opportunities for biodiversity conservation, economic development, social benefits and improved management capacity. Funds generated from the Lion Conservation Levy will play a key role in providing much needed assistance where required for conservation, research and social upliftment.

6.2.3.3. *LIODIS – LION DNA IDENTIFICATION SYSTEM*

Based on similar principles to the much acclaimed RhODIS® (Rhino DNA Index System) which is a project that was initiated by the Veterinary Genetics Laboratory of the University of Pretoria in order to help with the plight of the rhinos. The Veterinary Genetics Laboratory collected DNA samples of rhinos across the country to create a database using the unique DNA profile of individual rhinos. The goal is for all rhinos to be on the system. This will deter poachers and assist in forensic prosecutions. (RhODIS, 2018)



The Scientific Authority does not consider the export of captive-bred lion trophies or captive-bred live lion for zoological or breeding purposes to be detrimental to the wild lion population in South Africa. At present there is no evidence to suggest that the lion bone trade between South Africa and East Southeast Asia is detrimental to South Africa's wild lion population. In accordance with the annotation to the Appendix listing of the African lion that was adopted at the 17th Conference of the Parties to CITES, a quota for the export of skeletons derived from captive breeding operations must be established and revised on an annual basis to ensure sustainability, and measures must be implemented to prevent any detrimental impact to wild lion populations. (Scientific Authority, 2018)

Considering the perceived risks of the legal trade of lions trophies and derivatives such as bones could have on wild lion populations, PHASA hopes to implement LiODIS (Lions DNA Index System) which will aim to primarily record all captive lion populations and some wild and wild managed lions if required. PHASA will campaign that as a required export prerequisite for ranched lion trophies or derivatives, they must be identifiable on LiODIS. This system could play a massive role in preventing the poaching of wild and wild managed lions and help identify the origin of illicit traded lion derivatives.

A secondary objective is for LiODIS to be used as a hub to identify potential genetic bottlenecks and ensure that ranched lions are managed to maintain genetic integrity for the benefit of wild and managed-wild lion populations should the need ever arise.

### 6.2.4. SOCIAL DEVELOPMENT

Social development is about improving the well-being of every individual in society so they can reach their full potential. The success of society is linked to the well-being of each and every citizen. Social development means investing in people. It requires the removal of barriers so that all citizens can journey toward their dreams with confidence and dignity. It is about refusing to accept that people who live in poverty will always be poor. It is about helping people so they can move forward on their path to self-sufficiency. (GNU, 2018)

Dr M Tolba, previous executive director of UN Environmental Programme, warned CITES in 1992: “There are loud complaints from a number of developing countries that the rich countries are only interested in making Third World countries into a natural history museum. They are not giving food to their people.” (Hutton, 2010) Most if not all of our National and Provincial Parks are surrounded by rural communities and in many instances these communities were excluded and removed from their land to develop many of these parks. If meaningful benefits and social benefits for these communities cannot be derived for the benefit of these communities, this could have devastating implications for wildlife in the future as the human population continues to expand.

At the Biodiversity Economy Innovation Conference on the 25th August 2018 the President emphasized, **the survival of humanity, depends on the sustainable use of our natural resources. We need to grow the current 20million ha of wildlife land in white ownership to 30million ha by including black participants. We need to develop the wildlife economy through game farming, hunting, hospitality and the supply of game meat** (Ramaphosa, 2018)

#### 6.2.4.1. COMMUNITY UPLIFTMENT AND SUPPORT

All major threats to lions are triggered by socio-economic constraints caused by human population growth. Wildlife will be conserved when the socio-economic benefit of the sustainable use of this renewable natural resource has greater socio-economic benefit to land holders than other land use options. **Unless lion conservation benefits local rural people, no form of legislation will ensure the long-term survival of lion populations.**

Understanding the context within which trophy hunting occurs is critical to understanding its potential to benefit conservation. In many parts of the world, much wildlife exists outside of protected areas. Wildlife shares landscapes with people, and typically competes for space and environmental resources with other forms of economically productive land uses, such as agriculture and pastoralism, upon which the livelihoods of local people depend. Wildlife can impose serious costs on local people, including physical harm, damaging crops, and competing with livestock for forage. Where wildlife provides few benefits to local people and/or imposes substantial costs, it is often killed (legally or

illegally) for food, various commercially valuable wildlife products, or as problem animals, and its habitats are degraded or lost to other forms of land use. In some circumstances trophy hunting can address this problem by effectively making wildlife more valuable than, and/or complementary to, other forms of land use. It can return benefits to local people (preferably through effective co-management), encouraging their support for wildlife, and motivating investment at community, private, and government levels for research, monitoring, habitat protection, and enforcement against illegal use. Trophy hunting, if well managed, is often a higher value, lower impact land use than alternatives such as agriculture or tourism (IUCN S., 2012).

Once the LBCS is implemented important initiatives can be created to assist with community upliftment and support especially in communities surrounding wildlife habitat, ensuring that they see the benefits from conservation and become guardians of these precious areas.

### 6.2.5. ECONOMIC DEVELOPMENT

Wildlife conservation in Africa can no longer take place at the expense of, or in isolation from our rural people and South Africa cannot afford the luxury of large unmanaged wildlife areas. The wildlife industry has grown and game numbers, including lions, have increased in South Africa, during the last decade, because the socio-economic value of wildlife has had a greater value to landholders than other land use options.

Lion hunting has been the top income generator over the last few years and accounts for between R110 – R195 million or 6-12% of all income derived from trophy hunting. **In stark contrast, the total revenue from the hunting of wild and managed wild lions in South Africa is likely to only be about R3 million per year.** (Funston, 2015) this equates to less than 0.3% of the annual revenue derived from the trophy hunting industry. It is thus clear that the lions share of the income generated is from the hunting of captive bred lions.

#### 6.2.5.1. INCREASE THE ECONOMIC CONTRIBUTION TO THE RURAL ECONOMY

The whole world needs to understand that, in Africa, if a wildlife asset pays, it stays. If it doesn't it is replaced with something that does pay. (Thomson R, 2018) This statement has been emphasised numerous times in this document as it is the single most important factor ensuring the long-term survival of wildlife habitat. Hunting generally takes place in the most rural and remote areas often void of photographic tourist and other forms of tourism whom wish to only visit tourism mega hotspots or locations.

The economic importance and value of lion hunting to the remote rural communities in South Africa, that receive little or no benefits from conventional tourism is often

overlooked. An increase in the economic contribution of lion management and utilization through responsible hunting to rural communities, is best achieved through:

- The transformation of the current legal framework, in order to facilitate an enabling environment for this most important sector of the wildlife economy to prosper and grow.
- Developing value add services and business in order to optimize income that may be obtained from high paying hunters and their companions who are attracted to visit remote areas because of the opportunity to hunt ranched lions.

PHASA fully supports the vision of the president Mr Cyril Ramaphosa. **“Through the development of government and private sector partnerships it is anticipated that the biodiversity economy will be able to create for starters 162 000 jobs and R47billion can be invested in the biodiversity economy.”** (Ramaphosa, 2018)

### 6.2.5.2. *JOB CREATION AND SKILLS DEVELOPMENT*

Job creation and skills development should take place for the benefit of all our people involved in the hunting and tourism related value chain, that includes the associated related business and services. From a private land owners’ point of view, lions are amongst the most sought after animals for photographic safaris and trophy hunting, leading to the increase of lion breeding and populations on private land to the point where the private sector is responsible for managing the largest portion of the lion population in South Africa. (Van der Merwe, 2017)

PHASA represents over 800 rural businesses and our members are the backbone of the wildlife ranching sector. According to the green economy report, this sector provides over 65 000 jobs and trophy hunting generated an estimated R1.96 billion in 2014 for the green economy. (Taylor, 2016)

What makes the spending of hunters so important is that hunting mainly occurs in rural areas, which are in dire need of job creation and economic development, between 70% and 80% of trophy hunters’ spending takes place in the area of the hunt. In addition, hunting creates jobs, particularly in rural areas where employment is most needed. In three of the top hunting provinces – the Northern Cape, Free State and Limpopo provinces – hunting created 31 500 jobs. (17 806 in Limpopo, 9 072 in the Northern Cape and 4 558 in the Free State.) (van der Merwe, 2018)

### 6.3. BREEDING OF LIONS IN CAPTIVITY

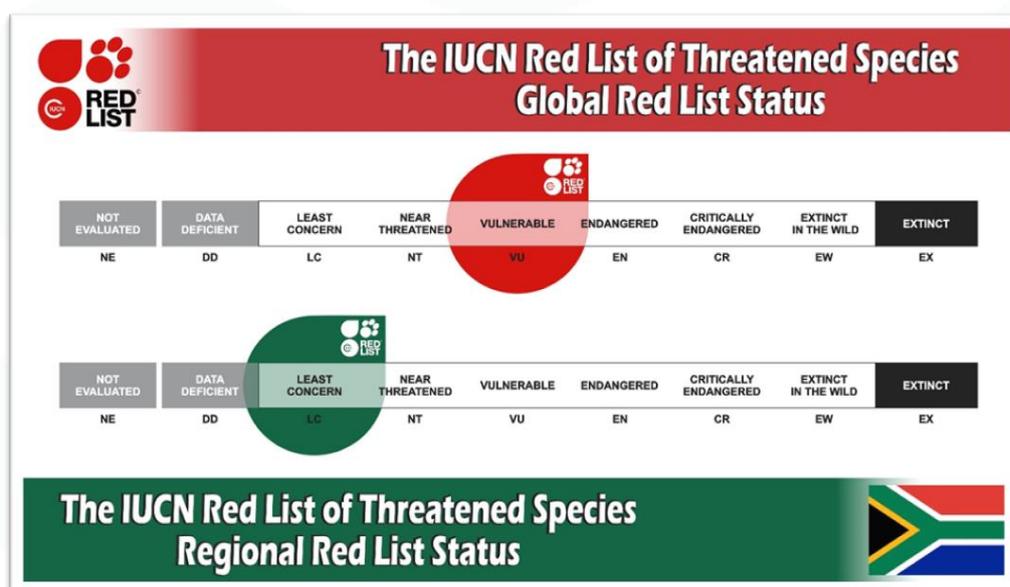
Currently lions are considered to be of Least Concern according to the IUCN – Regional Red Data List Status (2016) with over 2074 mature individual in South Africa. However, the

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

Global Red Data List Status for lions remains vulnerable. It is further estimated that there are currently over 8 000 - 10 000 Captive Bred Lions (CBL), in South Africa. (Jones, 2018)

The biggest question that the HPL need to address regardless of their decision is the consequences of their decision, what do you do with these lions? 8 000 – 10 000 lions can't all just be set free as all our small reserves, provincial and national parks are already saturated and euthanising an estimate of at least 90 per year. (Miller, 2014)

The International Conservation Regulators including CoP17, CITES, IUCN and Red Data List all do not recognise or count any animals on private wildlife ranches as “wild animals”. These organisations do not recognise semi-extensive or extensive wildlife ranches as “the wild”. **Thus, all wildlife in private ownership or on game ranchers including roan antelope, sable and lions in South Africa are viewed as making no contribution to conservation.** (Dry D. G., 4 July 2016)



The International Union for Conservation of Nature (IUCN) Red List of Threatened Species recognised **South Africa as the only African country with growth in every lion population, all of which were fenced** (Bauer H. C., 2015).

**Currently none of the managed wild populations in the 45 smaller fenced reserves was listed by the IUCN as viable or potentially viable population.** (Funston, 2015)

The IUCN policy statement on captive breeding was prepared by the Species Survival Commission (SSC) Captive Breeding Specialist Group and approved by the IUCN Council on the 4th September 1987.

Habitat protection alone is not sufficient if the expressed goal of the World Conservation Strategy, the maintenance of biotic diversity, is to be achieved. Establishment of self-sustaining captive populations and other supportive intervention will be needed to avoid the loss of many species, especially those at high risk in greatly reduced, highly fragmented, and distributed habitats. Captive breeding programmes need to be established before species are reduced to critically low numbers, and thereafter need to be co-ordinated internationally according to sound biological principles, with a view to the maintaining or re-establishment of viable populations in the wild. (IUCN Policy Statement, 1987)

The African lion population is thought to have decreased by 43%, with approximately 20,000 lions remaining. Lions in 23 unfenced reserves in 11 countries are estimated to have dropped by 62% between 1993 and 2014 (Bauer, 2016). South Africa is currently home to 36% (wild and captive) of the entire African lion population and plays a vital role in securing this species future. **Leading carnivore specialists often overlook the significant contribution CBL make to the conservation of the species, representing over 79.5% of the South African and 28.6% of the entire African lion population.**

The IUCN – Policy statement argues that captive programmes involving species at risk should be conducted primarily for the benefit of the species and without commercial transactions. This policy is fatally flawed as there is no incentive for private enterprise to be involved in the conservation of species at risk.

Captive populations need to be founded and managed according to sound scientific and economic principles for the primary purpose of securing the survival of species through stable, self-sustaining captive populations. Stable captive populations preserve the option of reintroduction and/or supplementation of wild populations.

#### 6.4. HUNTING OF CAPTIVE BRED LIONS

**It is important to note the African lion, (*Panthera Leo*), an indigenous species to South Africa – is not facing extinction, or “an unprecedented crisis” from either hunting, captive breeding or the trade in lion bone. “Hunting is allowed in South Africa, and forms an integral part of the governments sustainable utilisation policies, as enshrined in our constitution.” (Molewa M. E., 2015)**

**The government will continue to support the legal hunting industry, as well as the trade in legally acquired specimens such as hunting trophies. The African lion is an indigenous species listed as threatened or protected in terms of the Biodiversity Act. Therefore, all activities involving the African Lion, including hunting, possession and trade are regulated through a permit system. (Molewa M. E., 2015)**

Current lion management categories in South Africa

“wild lions” are lions that fulfil a role in biodiversity processes and are largely unmanaged. They exist only in formally proclaimed national parks and game reserves, where vital rates and lion demographics are not actively manipulated

“managed wild lions” include all lions that have been re-introduced into smaller fenced reserves (<1000km<sup>2</sup>) and are managed to limit population growth and maintain genetic diversity. Managers actively manipulate some vital rates and demographics, including prey base supplementation.

“captive lion” means any lion that is kept in a controlled environment

It is recommended that hunting of lion from reserves smaller than 1000 km<sup>2</sup> be permitted only when in accordance with a meta-population management approach, and that guidelines be developed in this regard. (Scientific Authority, 2018)

Under the PHASA LBCS, PHASA recommends that captive bred lions also be divided into two distinct groupings similar to wild and wild managed lions.

Proposed lion categories for lions born in controlled environments

“tamed lions” are lions that have had continuous direct human interaction and include:

- (a) Bottle raising of cubs
- (b) Cub petting
- (c) Lion walks and film making
- (d) Zoos, circuses, lion parks and sanctuaries
- (e) Education and research

**THESE LIONS MAY NOT BE HUNTED**

“ranching lions” are lions of any origin (excluding tamed lions) that can fend for themselves in an extensive or semi-extensive system which are managed for sustainable utilisation purpose. These lions form part of the Lion – Biodiversity Conservation Strategy plan for lions in South Africa.

Through the LBCS PHASA intends creating a win – win environment for all stakeholders, by assisting government in the prevention of hunting “tamed lions” and ensuring that lions born in controlled environments assist with achieving the goals and objectives of the BMP.

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

Funds raised through the “Conservation Levy” can be used to assist communities and ensure the research objectives of the BMP is achieved. The implementation of LiODIS can also play a crucial role in developing protocols and DNA standardisation across South Africa ensuring poached and illicit traded specimens can be traced and identified.

Figure 16 – “Tamed Lions” such as this cub that is petted MAY NOT BE HUNTED



### 6.5. TRADE IN LION BONES AND LEOPARD SKINS

As per the LBCS PHASA emphasises that the majority of Lion bones can be harvested from tamed lions “which may not be hunted”. However, PHASA has no objection to the derivatives of hunted wild, wild managed or ranched lions been used to generate a further income for hunters, local communities or ranchers.

Once more the importance of genetic standardisation in DNA testing laboratories is of vital importance and the implementation of LiODIS to ensure accurate traceability and accountability.

As an extreme example of the levels of culling in recent years, Madikwe GR culled its lion population down from over 110 individuals in 2009, to just 40 individuals in 2012 (D. Hofmeyr, pers. comm. 2012). Even without this extreme case, if we take the 700 lions in small reserves today and continue with current management practices, there would be an excess of about **90 lions per year** available for translocation, or to be euthanased in South Africa each year. (Miller, 2014)

In the 2017 North West Parks Board Annual Financial Statements they list the wildlife in the provincial reserves as “**Game – Biological assets**” with a value of R 513 million. Why then are countless lions just euthanised in particular in Madikwe Game Reserve, with no benefit for rural people or communities who are landowners of the reserve? These lions could surely be hunted, or the derivatives used to benefit local communities surrounding the reserve? **This certainly needs to be addressed and investigated as communities “Biological assets” are currently just squandered.**

Damage causing animals (especially leopard) are often killed with or without a permit as the economic burden they inflict on rural communities can be untenable. The need to identify motivational incentives for local communities is of vital importance as indiscriminate killing of leopards has and always will be the number one threat.

Strategic objectives and strategies need to be identified to allow local communities especially tribal leaders the opportunity to apply for hunting permits on behalf of both local and international hunters. It then becomes the prerogative of the community whether they wish to wear, utilise and or trade in leopard skin and other derivatives such as claws and floating bones. Due to the value created from the hunt and the ability to utilise the derivatives, this may incentivise communities to prevent indiscriminate poisoning, trapping and killing of leopards that otherwise have absolutely no value to them.

### 6.6. STOCKPILING

Sustainable utilisation of lion derivatives should be investigated to the fullest and if stockpiling is required the necessary steps should be investigated and implemented. We often refer to we must “conserve water” we must “conserve energy” both philosophies imply the wise and sustainable use of water and energy. Why then are lions any different? If we want to conserve lions we must ensure we utilise lions to the maximum benefit on behalf of local and rural communities.

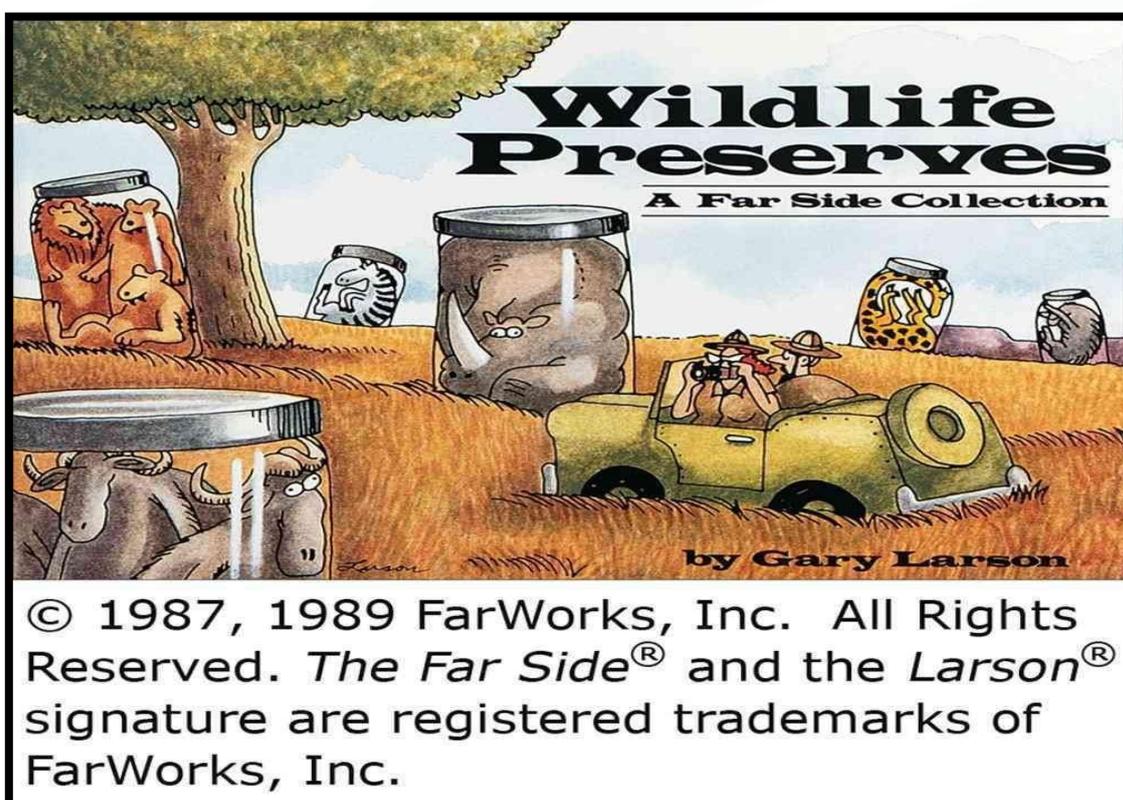
### 6.7. MANAGEMENT OF STOCKPILES

Genetic standardisation of microsatellite evaluations across various DNA laboratories for lions in South Africa is of crucial importance to ensure ease of testing and cross referencing between various institutions. This will ensure and help facilitate the traceability and DNA profiling of lions preventing illicit trade and ensuring total accountability.

### 6.8. IMPACT AND BENEFITS

According to the terms of reference, we need to identify how do various management practices like captive breeding, trade in lion bones and other specimens contribute to conservation in South Africa?

What is conservation, and what does it mean? Unfortunately, as just discussed people interpret conservation in many different ways often confusing it with preservation. Even the IUCN seems to have conflicting viewpoints about the matter.



## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

The reintroduction of lions into about 45 smaller fenced game reserves in South Africa has largely been for eco-tourism purposes, rather than ecological reasons (Slotow, 2009). Currently none of the managed wild populations in these 45 smaller fenced reserves was listed by the IUCN as viable or potentially viable population. (Funston, 2015) Thus apart from Kruger National Park and Kgalagadi Transfrontier Park according to the IUCN, NO other reserves are considered to make a contribution to the conservation of lions in South Africa.

Lions are a huge financial obligation, that require intensive management planning especially in South Africa. The long-term economic feasibility of creating more wildlife habitat especially for free-roaming lions is not viable. Similarly, **unless a conservation area is in excess of 1,000km<sup>2</sup> the IUCN won't recognise the conservation value and will reflect the population as non-viable.**

**The unfortunate truth is that ALL of the managed wild lions in South Africa are either not economically viable or viable from an IUCN conservation perspective.**

The IUCN however, recognizes that where an economic value can be attached to a wild living resource, perverse incentives removed, and costs and benefits internalized, favourable conditions can be created for investment in the conservation and the sustainable use of the resource, thus reducing the risk of resource degradation, depletion, and habitat conversion. (IUCN, 2012)

PHASA defines **conservation** as: **“the prevention of wasteful use of a resource or wise and sustainable use of a resource by man”**

**Thus, the wise utilisation of natural resources such as lions, elephants, rhino and leopards for the benefit of rural communities ensures the long-term survival of these species. The income generated will help create more wildlife habitat and grow the wildlife economy through job creation and incentivised conservation.**

## 6.9. HANDLING AND WELL-BEING

Animal welfare is of vital importance and should never be compromised on. The question therefore needs to be asked is the condition of the lion in the picture below acceptable?

Figure 17 – Male lion, a welfare concern?



(Mathios, 2020)

This lion's condition is most certainly not acceptable and had this photo been taken at a lion breeders' facility. The owner would be facing the full legal might of the NSPCA, DEFF as well as a guaranteed cover picture in Beeld with every animal rights syndicate condemning this as cruelty calling for a ban of trophy hunting. But this lion was not in a breeder's facility but rather in Kruger National Park between s114 and s118. So, there was no furore, and no front-page headline but does this make it acceptable because it is in Kruger?

**It is important to realise that all wildlife within South Africa is managed. Even Kruger, South Africa's largest 'wilderness' is described as one of the most heavily managed reserves in Africa. (Bauer, 2016)**

The recent court judgment regarding welfare concerns, the NSPCA and the lion bone quota have set a dangerous precedent and the HLP will need to address this issue and provide guidance.

## 7. DEFINITIONS

**"applicable legal requirements"** mean-

- a) any legal requirement or instrument contemplated in the Biodiversity Act;
- b) any legal requirement contemplated in applicable provincial legislation;

**"bait"** means any natural or artificial bait;

**"Biodiversity"** is the variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems.

**"Biodiversity Act"** means the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), including any amendment thereof;

**"bow"** means an instrument consisting of a body and string designed to launch and propel an arrow;

**"bred in captivity" or "captive bred"** means a specimen that was bred and born in a controlled environment;

**"cage"** means a boxlike enclosure having wires, bars or the like, for confining and displaying specimens.

**"canned hunting"** means an illegal activity which is outlawed as a prohibited method of hunting in terms of the Threatened or Protected Species Regulations.

**"captive breeding facility"** means a facility where a specimen, including listed threatened or protected animal species are bred and born in a controlled environment;

**"captive lion"** means any lion that is born in a controlled environment;

**"carnivore"** an animal that eats other animals;

**"carrying capacity"** is the amount of a given activity that can be accommodated within the environmental capacity of a defined area;

- "certificate of adequate enclosure"** means a document issued in terms of applicable provincial legislation in relation to land that has been fenced in such a manner that such fence would readily prevent specimens of listed threatened or protected species listed in such document, from escaping from such land;
- "CITES"** means the Convention on International Trade in Endangered Species of Wild Fauna and Flora;
- "CITES Regulations"** mean the Convention on International Trade in Endangered Species of Wild Fauna and Flora Regulations, developed in terms of section 97 of the Biodiversity Act;
- "conservation"** the prevention of wasteful use of a resource or wise and sustainable use of a resource by man;
- "conservation purposes"** mean carrying out a restricted activity, including the collection of such specimen from the wild, with the primary purpose of ensuring the survival of such specimen in the wild, in accordance with a
- a) conservation strategy or research program approved by the issuing authority; or
  - b) Biodiversity Management Plan;
- "conservation status"** means the regional or global conservation status of a listed threatened or protected species based on the IUCN Red List categories and criteria;
- "controlled environment"** means an enclosure that is of insufficient size for the management of self-sustaining populations of listed threatened or protected species, and designed to hold the specimens in such population in a manner that-
- a) prevents them from escaping; and
  - b) facilitates intensive human intervention or manipulation in the form of the provision of-
    - i. food or water, or both;
    - ii. artificial housing; or
    - iii. health care;

and may facilitate the intensive breeding or propagation of specimens of a listed threatened or protected species;

**"departmental database"** means a database developed and maintained by the department for the recording of information;

**"DNA"** means deoxyribonucleic acid, and refers to the molecules that carry the unique genetic information in the cells of a specific specimen of a listed threatened or protected species;

**"DNA certificate"** means a certificate issued in relation to the genotyping of a particular specimen of a listed threatened or protected species;

**"DNA sample"** means a blood or tissue sample of a specimen of a listed threatened or protected species;

**"extensive wildlife system"** means a natural environment-

- a) that is of sufficient size for the management of free roaming populations of listed threatened or protected species, irrespective of whether it is fenced or not;
- b) that meets the ecological requirements of the populations of listed threatened or protected species occurring on such land; and
- c) where no or minimal human intervention is required in the form of-
  - i. the provision of water;
  - ii. the supplementation of food, except in times of drought;
  - iii. the control of parasites or predation; or
  - iv. the provision of health care;

**"fragmentation"** means the breaking up of a habitat, ecosystem or land-use type into smaller, often isolated, parcels, thereby reducing the number of species that the habitat, ecosystem or land-use type can support;

**"free roaming populations"** mean viable populations of listed threatened or protected species capable of displaying natural social behaviour, while requiring no or minimal human intervention;

- "game ranch"** means an extensive wildlife system or semi-extensive wildlife system on which specimens including listed threatened or protected species are kept for commercial utilization;
- "genetic diversity"** means the variety of genes or sub-specific genetic varieties.
- "genetic resources"** means the genetic material with real or potential value;
- "genotyping"** means the process of determining or analysing the DNA profile of a specimen of a listed threatened or protected species;
- "habitat"** means the locality or environment in which an animal lives;
- "habitat degradation"** a decline in habitat quality for a species, e.g. related to changes in food availability, cover, or climate;
- "habitat fragmentation"** means the process and result of breaking an area of contiguous habitat into distinct patches;
- "habitat loss"** means the process where an area becomes less suitable for the survival of a species;
- "habitat management"** means the management activities involving vegetation, soil and other physiographic elements or characteristics in specific areas, with specific conservation, maintenance, improvement or restoration goals;
- "hunt"** means to-
- (a) kill, or attempt to kill, such specimen by any means, method or device whatsoever;
  - (b) search for, lie in wait for, drive, pursue, shoot at, or to discharge any missile at, such specimen with the intent to kill; or
  - (c) lure by any means, method or device whatsoever, such specimen with the intent to kill; in order to obtain the meat for personal consumption, or to obtain the tusk, horn, skin or any other recognizable part of such specimen as a memento of the hunt, but excludes-
    - i. the culling of such specimen;

- ii. the killing of such specimen that has become a damage-causing animal; or
- iii. the darting of such specimen;

**"hunting client"** means a person who is not a citizen of the Republic and also not a resident in the Republic, whether or not he or she pays or rewards a hunting outfitter, directly or indirectly for, or in connection with, the hunting of a specimen of a listed threatened or protected animal species;

**"hunting outfitter"** means a person who markets, assists with, offers, advertises or organizes the hunting of a specimen of a listed threatened or protected animal species, whether directly or through the use of an agent;

**"inbreeding depression"** is the loss of individual reproductive fitness, and thus population vigour and long-term viability, due to breeding between closely related individuals compared to less related individuals;

**"introduced population"** means a population of a listed threatened or protected species that has been translocated to, and released in, an area that does not fall within the natural distribution range of the translocated species;

**"IUCN Red List status"** means the conservation status of a listed threatened or protected species based on the IUCN Red List categories and criteria;

**"listed large predator"** means a specimen of any of the following listed threatened or protected species-

- a) African wild dog (*Lycaon pictus*);
- b) Brown hyaena (*Parahyaena brunnea*);
- c) Cheetah (*Acinonyx jubatus*);
- d) Leopard (*Panthera pardus*);
- e) Lion (*Panthera leo*); or
- f) Spotted hyaena (*Crocuta crocuta*);

**"legal framework"** means - National and provincial legislation.

**"management plan"** means a-

- a) management plan referred to in section 41 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003);
- b) biodiversity management plan developed in terms of section 43 of the Biodiversity Act;
- c) management plan developed in terms of any applicable norms and standards; or
- d) management plan developed in terms of applicable provincial legislation;

**"management purposes"** mean for the purpose of-

- a) translocating;
- b) marking; or
- c) collecting a DNA sample of;  
a specimen of a listed threatened or protected species;

**"managed wild lions"** include all lions that have been re-introduced into smaller fenced reserves (<1000km<sup>2</sup>), and are managed to limit population growth and maintain genetic diversity. Managers actively manipulate some vital rates and demographics, including prey base supplementation;

**"mark"** means an indelible imprint, micro-chip or any other recognized or prescribed means of identifying a specimen of a listed threatened or protected species, designed in such a way as to render the imitation of the mark by unauthorized persons as difficult as possible;

**"National Environmental Management Act"** means the National Environmental Management Act, 1998 (Act No. 107 of 1998), including any amendment thereof;

**"natural distribution range"** means the area in which a specimen of a listed threatened or protected species occurs naturally, or has occurred historically, without having been introduced into such area as a result of human intervention;

**"preservation"** is the prevention of the use of a natural resource by man;

**"professional hunter"** means a person who conducts a hunt, or offers or agrees to escort, guide, assist or accompany a hunting client in order

to enable such hunting client to hunt a specimen of a listed threatened or protected animal species;

**"protected area"** has the meaning assigned to it in terms of the Protected Areas Act;

**"Protected Areas Act"** means the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 1998), including any amendment thereof;

**"protected species"** means any species listed as protected in terms of section 56(1)(d) of the Biodiversity Act;

**"provincial conservation authority"** means the provincial department or provincial organ of state responsible for the conservation of biodiversity in a province;

**"ranching lions"** are lions of any origin (excluding tamed lions) that can fend for themselves in an extensive or semi-extensive system which are managed for sustainable utilisation purpose; these lions form part of the Lion – Biodiversity Conservation Strategy plan for lions in South Africa.

**"range"** means the amount of space needed by an animal in order to meet its survival needs;

**"rangeland"** means land that has vegetation suitable for grazing livestock, but that is too arid for crop farming;

**"rebound potential"** a measure of the ability of a species or population to recover from exploitation;

**"release"** means to intentionally-

- a) cease exercising physical control over;
- b) cease having in possession; or
- c) set free from its controlled environment;

a live specimen of a listed threatened or protected species;

**"responsible hunting"** means hunting which is -

- a) Conducted within the parameters of applicable legislation; and
- b) Conducted in a manner which protects and promotes the sustainable utilisation of wildlife;

- c) Promotes positive socio-economic and environmental outcomes;

**"restricted activity"** in relation to a specimen of a listed threatened or protected species, means

- a) hunting, catching, capturing or killing any living specimen of a listed threatened or protected species by any means, method or device whatsoever, including searching, pursuing, driving, lying in wait, luring, alluring, discharging a missile or injuring with intent to hunt, catch, capture or kill any such specimen;

**"risk assessment"** means a risk assessment requested by an issuing authority in terms of section 89 of the Biodiversity Act;

**"SANBI"** means the South African National Biodiversity Institute established in terms of section 10 of the Biodiversity Act;

**"sanctuary"** means a facility that provides permanent care to a specimen of a listed threatened or protected species that would be unable to sustain itself if released in an extensive wildlife system or semi-extensive wildlife system, whether as a result of injury or on account of human imprinting;

**"Scientific Authority"** means the Scientific Authority established in terms of section 60 of the Biodiversity Act;

**"scientific institution"** means-

- a) a component of an organ of state, or a non-governmental institution, involved in research;
- b) a registered research unit, department or faculty of a tertiary institution; or
- c) a herbarium, museum or any other institution where specimens of a listed threatened or protected species are kept or used for research, scientific information or identification purposes;

**"scientific purposes"** mean carrying out a restricted activity with the primary purpose of practicing science or conducting research;

**"semi-extensive wildlife system"** means an environment that is of sufficient in size for wildlife populations to display natural social

behaviour and are positively managed and produced rather than negatively protected;

**“sustainable use”** means the use of an organism, ecosystem or any other renewable resource at a rate within the bounds of its capacity for renewal;

**“tamed lions”** are lions that have had continuous direct human interaction and include:

- (a) Bottle raising of cubs;
- (b) Cub petting;
- (c) Lion walks and film making;
- (d) Zoos, circuses, lion parks and sanctuaries;
- (e) Education and research;

**These lions may not be hunted;**

**“threatened species”** means an indigenous species listed as critically endangered, endangered or vulnerable species in terms of section 56(1)(a), (b) and (c) of the Biodiversity Act;

**“wild animal”** means a specimen of an animal species other than a domestic or stock species;

**“wild lions”** are lions that fulfil a role in biodiversity processes and are largely unmanaged. They exist only in formally proclaimed national parks and game reserves, where vital rates and lion demographics are not actively manipulated;

**“wild population”** means a group or collection of specimens of the same listed threatened or protected species that lives, grows and multiplies in an extensive wildlife system;

## REFERENCES

- Balme G. A., Hunter L., and Braczkowski A. R., (2012). Applicability of Age-Based Hunting Regulations for African Leopards. *PLoS ONE*, 7(4): e35209. doi:10.1371/journal.pone.0035209.
- Balme, G., Hunter, L., Goodman, P., Ferguson, H., Craigie, J. and Slotow, R. (2010). An adaptive management approach to the trophy hunting of Leopards: a case-study from Kwa-Zulu Natal, South Africa. *The Biology and Conservation of Wild Felids*, D. Macdonald & A. Loveridge (eds.), Oxford University Press, New York, 341-352.
- Balme, G.A. and Hunter, L.T. (2013). Why leopards commit infanticide. *Animal Behaviour*, 86(4), pp.791-799.
- Balme, G.A., Lindsey, P.A., Swanepoel, L.H., and Hunter, L.T.B. (2014). Failure of Research to Address the Range wide Conservation Needs of Large Carnivores: Leopards in South Africa as a Case Study. *Conservation Letters*, 7, 3-11.
- Bauer H, .. C. (2015). Lion (*Panthera leo*) populations are declining rapidly across Africa, except in intensively managed areas. *PNAS*, 14894–14899.
- Bauer, H. C. (2015). Lion (*Panthera leo*) populations are declining rapidly across Africa, except in intensively managed areas. *PNAS*, 122(48), 14894-14899.
- Bauer, H. C. (2016). *REPLY TO RIGGIO ET AL.: Ongoing lion declines across most of Africa warrant urgent action*. Retrieved from semanticscholar.org: <https://pdfs.semanticscholar.org/8a24/14a192da1471bcc0f34c1824f3646fbbd0f2.pdf>
- Bauer, H. P. (2016). *The IUCN Red List of Threatened Species 2016*:. Retrieved 02 11, 2018, from iucnredlist.org: <http://DX.DOI.ORG/10.2305/IUCN.UK.2016-3.RLTS.T15951A107265605.en>
- Bauer. H, C. G. (2015). Lion (*Panthera leo*) populations are declining rapidly across Africa, except in intensively managed areas. *PNAS*, 122(48), 14894-14899.
- Björklund, M. (2003). The risk of inbreeding due to habitat loss in the lion (*Panthera leo*). *Conservation Genetics*, 4, 515-523.
- Blame GA, Batchelor A, De Woronin Britz N, Seymour G, Grover M, Hes L, Macdonald DW, Hunter LTB. (2012). Reproductive success of female leopards *Panthera pardus*: the importance of top-down processes. *Mammal Society / Blackwell Publishing*.
- Blame GA, Slotow R, Hunter LT. (2009). Impact of conservation interventions on the dynamics and persistence of a persecuted leopard (*Panthera pardus*) population. *Biological Conservation*, 142:2681-2690.
- Blame GA, Slotow R, Hunter LTB. (2010). Edge effects and the impact of non-protected areas in carnivore conservation: leopards in the Pinda-Mkhuze Complex. *South Africa. Animal Conservation*, 13: 315-323.
- Botham, J. d. (2005). *Intensive wildlife production in southern Africa*. Pretoria: Van Schaik Publishers.
- Chapman, S. & Balme, G. (2010). An estimate of leopard population density in a private reserve in KwaZulu-Natal, South Africa, using camera-traps and capture-recapture models. *South African Journal of Wildlife Research*, 40.2 (2010): 114-120.
- Chase Grey, J.N., Bell, S., and Hill, R.A. (2017). Leopard diets and landowner perceptions of human wildlife conflict in the Soutpansberg Mountains, South Africa. *Journal for Nature Conservation*, 37, 56–65.
- Chase Grey, J.N., Kent, V.T., & Hill, R.A. (2013). Evidence of a High Density Population of Harvested Leopards in a Montane Environment. *PLoS ONE*, 8(12): e82832. doi:10.1371/journal.pone.0082832.
- Child, B. (1996). The practice and principles of community-based wildlife management in Zimbabwe:. 5: 369-398.
- CITES Trade Database, U. W. (2014). A socio-ecological approach towards understanding conflict between leopards (*Panthera pardus*) and humans in South Africa: Implications for leopard conservation and farming livelihoods. *PhD Thesis, Department of Anthropology, Durham University, USA*.

- Cloete PC, V. d. (2015). *Profitability of the game ranching industry in South Africa*. (2nd ed.). Pretoria: Caxton Publishers.
- Cogliano, M. (2018). Trophy Importation and the Permitting Process: United States. *African Wildlife Consultative Forum*. Kampala, Uganda.
- Conservation Tribune. (1996, June 25). The Shape of a scandal. *International Wildlife Management Consortium*.
- Crookes, K.R., Sanjayan, M.A., & Doak, D.F. (1998). New insights on cheetah conservation through demographic modelling. *Conservation Biology*, 12: 889-895.
- de Klerk, R. (2020, March 13). *Safari News*. Retrieved from <https://www.safari.com/news/featured/the-elephant-in-the-room/>  
<https://www.safari.com/news/featured/the-elephant-in-the-room/>
- de Waal, L. (2018, August 20 ). *Skye is the Limit – The Kruger Lion Hunt Saga Continues*. Retrieved November 13, 2018, from Conservation Action Trust: <https://conservationaction.co.za/media-articles/skye-is-the-limit-the-kruger-lion-hunt-saga-continues/>
- DEA. (2018). Hunting Statistics. Pretoria: Department of Environmental Affairs, Republic of South Africa.
- DEA. (2018). *Leopard Quota Review: South Africa* . *CITES Animals Committee*. Retrieved from CITES: <https://cites.org/sites/default/files/eng/com/ac/30/E-AC30-15-A3.pdf>.
- Degeorges, A. (1997, November 22). *CODE OF ETHICAL SPORT HUNTING CONDUCT FOR AFRICA*. Retrieved 11 12, 2018, from <https://www.researchgate.net/publication/274311085>
- Dickson, B., Hutton, J. and Adams, B. (2009). Recreational Hunting, Conservation and Rural Livelihoods. *Science and Practice Wiley-Blackwell Oxford, UK* . , 384 pp. 14.
- Dry, D. G. (2016). Conservation Judisprudence. *Wildlife Ranching Magazine*(1), 25-29.
- Dry, D. G. (4 July 2016). GAME RANCHING IS A BIODIVERSITY ECONOMY ASSET CLASS AND NOT A GOVERNMENT CONSERVATION ESTATE. *49th SASAS Congress, Western Cape*. Unpublished.
- Dunston, E. A. (2017). Does captivity influence territorial and hunting behaviour? Assessment for an ex situ reintroduction program of African lions *Panthera leo*. *ISSN 0305-1838*.
- Funston PJ, G. R. (2013). Insights into the Management of Large Carnivores for Profitable Wildlife-Based Land Uses in African Savannas. (8(3): e59044. doi:10.1371/journal.pone.0059044).
- Funston PJ, Groom RJ, Lindsey PA,. (2013). Insights into the Management of Large Carnivores for Profitable Wildlife-Based Land Uses in African Savannas . *PLoS ONE* 8(3):e59044, doi:10.1371/journal.pone.0059044.
- Funston, P. (2015). Biodiversity Management Plan for the Lion (*Panthera leo*) in South Africa. *Government Gazette*, 1-66.
- Funston, P. (2015). Biodiversity Management Plan for the Lion (*Panthera leo*) in South Africa. *Government Gazette*, 1-66.
- Gaona, P., Ferreras, P., & Delibes, M. (1998). Dynamics and viability of a metapopulation of the endangered Iberian lynx. *Ecol Mono*, 68: 349-370.
- GNU. (2018). *GNU*. (New Nouveau Brunswick Canada) Retrieved 11 15, 2018, from Economic and Social Inclusion Corporation : [https://www2.gnb.ca/content/gnb/en/departments/esic/overview/content/what\\_is\\_social\\_development.html](https://www2.gnb.ca/content/gnb/en/departments/esic/overview/content/what_is_social_development.html)
- Government Gazette No. 40412. (2016, November 10). *Notice 749 of 2016. Department of Environment Affairs. Government Gazette. No. 40412. Vol. 617.*, Retrieved from Norms and Standards for the Management of Damage-Causing Animals in South Africa.
- Government Gazette No. 40601. (2017, February 8). *Notice 75 of 2017. Department of Environment Affairs. Government Gazette No. 40601*. Retrieved from Draft Norms and Standards for the Management and Monitoring of the Hunting of Leopards in South Africa for Trophy Hunting Purposes.
- Hargreaves, R. (2010). An analysis of the argument that breeding and keeping lions in captivity in South Africa for use in so called ‘canned hunts’ is ethically sound because the practice reduces the hunting pressure on wild lions throughout the whole of Africa. *Unpublished Report, WildCat Conservation Legal Aid Society, Washington, DC*.
- Harper, C. (2018). Microsatellite evaluation of ranched lions comments.

- Hayward MW, C. M. (2015). Ambiguity in guideline definitions introduces assessor bias and influences consistency in IUCN Red List status assessments. *Frontiers in Ecology and Evolution*, 3:87(doi: 10.3389/fevo.2015.00087).
- Hayward MW, H. G. (2011). Do Lions Panthera leo Actively Select Prey or Do Prey Preferences Simply Reflect Chance Responses via Evolutionary Adaptations to Optimal Foraging? *PLoS ONE*, 6(9): e23607. doi:10.1371/journal.pone.0023607.
- Hayward MW, O. J. (2007). Carrying capacity of large African predators: Predictions and tests. *139*(219-229).
- Hayward, M. &. (2007). Activity patterns of reintroduced lion Panthera leo and spotted hyaena Crocuta crocuta in Addo Elephant National Park. *African Journal of Ecology* 45, 135–141.
- Hayward, M. H. (2009). Do fences constrain predator movements on an evolutionary scale? Home range, food intake and movement patterns of large predators reintroduced to Addo Elephant National Park. *18*(887–904).
- Hofmeyr. (2012).
- Hunter L., S. J. (n.d.). Reintroducing lions Panthera leo to northern Kwazulu-Natal, South Africa: short-term biological and technical successes but equivocal long-term conservation. *41 - pp 196-204*.
- Hutton, J. (2010). *CITES: Authority Without Accountability a Responsibility*. Retrieved from Html file: 15-02-2010.
- IUCN. (2014). *Guidelines for using the IUCN Red List categories and Criteria*. IUCN Standards and Petitions Subcommittee; version 11.
- IUCN. (2016). Informing decisions on trophy hunting: a briefing paper for European Union decision-makers regarding potential plans for restriction of imports of hunting trophies., (p. IUCN Briefing Paper April 2016.).
- IUCN Policy Statement. (1987, 09 04). *IUCN*. Retrieved 02 11, 2018, from [http://cmsdata.iucn.org/downloads/1987\\_iucn\\_policy\\_statement\\_\\_\\_captive\\_breeding.pdf](http://cmsdata.iucn.org/downloads/1987_iucn_policy_statement___captive_breeding.pdf)
- IUCN, S. (2012). *Guiding Principles on Trophy Hunting as a Tool for Creating Conservation Incentives*. Gland: Ver. 1.0 IUCN.
- Jones, M. (2018). Genesis of captive lion breeding for hunting and the factors that promote the industry. *South African Parliamentary Colloquium*. Cape Town - South Africa: Born Free Foundation.
- K Wood, C. V. (2016). *Beyond Cecil: Africa's Lions in Crisis*. Panthera, Wildaid and Wildcru.
- Keet D.F., D.-M. H. (2009). *Lion (Panthera leo) Bovine tuberculosis disease risk assessment (Workshop report)*. Sukuza: South Africa : Conservation Breeding Specialist Group (CBSG SSC / IUCN), CBSG Southern Africa, Endangered Wildlife Trust.
- Koch, E. (1991, April 5). *Mail & Guardian*. Retrieved from Nelson Mandela - Tribute to an icon: <https://madiba.mg.co.za/article/1991-04-05-mandela-goes-green>
- Lehmann MB, F. P. (2008). Reproductive biology of a pride of lions on Karongwe Game Reserve, South Africa. *African Zoology*, 43(2): 230-236.
- Lehmann, M. F. (2008). Feeding behaviour of lions (Panthera leo) on a small reserve. *South African Journal of Wildlife Research.*, 38, 66–78.
- Leopold, A. (1933). Game Management 1986. In A. Leopold, *Game Management*. (p. (First published 1933.) 481 pp). Madison: University of Wisconsin.
- Lindsey P, A. R. (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, 11-22.
- Lindsey P, A. R. (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(11-22), 11-22.
- Lindsey, P. A., P. A. Roulet, and S. S. Romanach. (2007). Economic and conservation significance of the trophy hunting industry in sub-Saharan Africa. *Biological Conservation*, 134:455-469.
- Loots, P. (2018, 02 11). Game Rancher.
- Marnewick, K. (2018). Impact of Captive ‘Hunting’ on Lion Conservation. *Parliament Portfolio Committee on Environmental Affairs Colloquium on Captive Lion Breeding for Hunting 21 - 22 August 2018*. Cape Town: Endangered Wildlife Trust.

- Marx, M. (2016, November). Dr. Stellenbosch, Western Cape.
- Mathios, N. (2020). *Kruger Magazie*. Retrieved from Facebook.
- Miller S, R. J. (2016). *A conservation assessment of Panthera leo*. The Red List of Mammals of South Africa, Lesotho and Swaziland.
- Miller, F. (2014). Rapid growth rates of lion (*Panthera leo*) populations in small, fenced reserves in South Africa: a management dilemma. *44(1): 43–55*.
- Molewa, D. E. (2018, August 22). *SA'S LION CONSERVATION POLICIES ROOTED IN SCIENCE - Cape Times*. Retrieved from Press Reader: <https://www.pressreader.com/south-africa/cape-times/20180822/281603831317759>
- Molewa, M. E. (2015). *Let's put the lid on wild tales of canned hunting*. Sunday Times News Paper.
- NSPCA. (2016). *NSPCA - Annual Report (2015-2016)*. Retrieved November 14, 2018, from [https://nspca.co.za/wp-content/uploads/2016/12/NSPCA\\_Annual\\_report\\_2015-2016\\_Finalized-1.pdf](https://nspca.co.za/wp-content/uploads/2016/12/NSPCA_Annual_report_2015-2016_Finalized-1.pdf)
- NSPCA. (2017). *NSPCA*. Retrieved November 2018, 14, from Annual Report (2016-2017): <https://nspca.co.za/wp-content/uploads/2018/03/Annual-Report-2016-2017.pdf>
- Oberem, P. (2016). *The New Game Rancher*. Cape Town: Briza Publications.
- Owen C, Niemann S, Slotow R. (2010). Copulatory parameters and reproductive success of wild leopards in South Africa. *Journal of Mammalogy*, 91(5):1178-1187.
- Packer C, Kosmala M, Cooley HS, Brink H, Pintea L, et al. (2009). Sport hunting predator control and conservation of large predators. *4:e5941*.
- Packer, C. C. (2013). Conserving large carnivores: dollars and fence. *16(5): 635-641*.
- Packer, C. C. (2013). Conserving large carnivores: dollars and fence. *16(5): 635-641*.
- Packer, C. P. (1991). Case study of a population bottleneck: lions of the Ngorongoro crater. *Biological Conservation*, 5, 219-230.
- Packer, C., Brink, H., Kissui, B.M, Maliti, H., Kushnir, H. & Caro, T. (2011). Effects of trophy hunting on lion and leopard populations in Tanzania. *Conservation Biology*, 25, 142-153.
- Pitman RT, Swanepoel LH, Hunter L, Slotow R, Blame GA,. (2015). The importance of refugia, ecological traps and scale for large carnivore management. *Biodiversity and Conservation*, 24:1975-1987.
- Power, R. (2002). Prey selection of lions *Panthera leo* in a small, enclosed reserve. *45(67-75)*.
- Ramaphosa, C. (2018). Biodiversity Economy Innovation Conference. Thohoyandou.
- Redford, K. H. (2011). What does it mean to successfully conserve a (vertebrate) species? *Bioscience*, 39-48.
- RhODIS. (2018). *RhODIS*. Retrieved 11 10, 2018, from eRhODIS: <https://erhosis.org/>
- Ripple, W. J. (2015). Collapse of the world's largest herbivores. *Sci. Adv*, 1:e1400103.(doi: 10.1126/sciadv.1400103).
- SANBI. (2011). *National Biodiversity Assessment. GIS Metadata: Detailed Report for Protected Areas*.
- SANBI. (2012). *Information collated by the Scientific Authority in response to the CITES Periodic Review process for Lion*. . Pretoria, South Africa: South African National Biodiversity Institute.
- SANParks. (2016, August 2016). *South African National Parks (SANParks) on its 4th Quarterly Performance*. Retrieved from Parliamentary Monitoring Group: <https://pmg.org.za/committee-meeting/23072/>
- SASA. (2015). *Non-detrimental finding for Panthera pardus (leopard)*. Issued by the Scientific Authority of South Africa.
- Scientific Authority. (2018, October 01). *Non-Detriment Findings - South African National Biodiversity Institute*. Retrieved from South African National Biodiversity Institute: <https://www.sanbi.org/biodiversity/science-into-policy-action/science-authority/non-detriment-findings/>
- Simon Stuart, L. B. (2016, April). *IUCN*. Retrieved from Informing decisions on trophy hunting, A Briefing Paper for European Union Decision-makers regarding: [http://cmsdata.iucn.org/downloads/iucn\\_informingdecisionsontrophyhuntingv1.pdf](http://cmsdata.iucn.org/downloads/iucn_informingdecisionsontrophyhuntingv1.pdf)
- Sinovas, P., Price, B., King, E., Davis, F., Hinsley, A., Pavitt, A., and Pfab, M. (2016). Southern Africa's wildlife trade: an analysis of CITES trade in SADC countries. Technical report

- prepared for the South African National Biodiversity Institute (SANBI). UNEP- WCMC, Cambridge, UK.
- Slotow, R. &. (2009). Reintroduction decisions taken at the incorrect social scale devalue their conservation contribution: African lion in South Africa. In M. &. Hayward (Ed.), *The reintroduction of top-order predators* (pp. 43-71). Oxford: Blackwell Publishing.
- Susan M. Miller, C. K. (August 23, 2014). Evaluation of Microsatellite Markers for Populations Studies and Forensic Identification of African Lions (*Panthera leo*). *The Journal of Heredity*, 856-866.
- Swanepoel LH, Balme G, Williams S, Power RJ, Snyman A, Gaigher I, Senekal C, Martins Q, Child MF. (n.d.). A conservation assessment of *Panthera pardus*. In Child MF, Roxburgh L, Do Linh San E, Raimondo D, Davies-Mostert HT, editors. *The Red List of Mammals of South Africa, Swaziland and Lesotho*. . *South African National Biodiversity Institute and Endangered Wildlife Trust, South Africa*.
- Swanepoel LH, Lindsey P, Somersault MJ, Van Haven W, Dalerum F. (2014). The relative importance of trophy harvest and retaliatory killing of large carnivores: South African leopards as a case study. *South African Journal of Wildlife Research*, 44:115-134.
- Swanepoel LH, Somers MJ, Dalerum F. (2015). Functional Responses of Retaliatory Killing versus Recreational Sport Hunting of Leopards in South Africa. *PLOS ONE DOI:10.1371*.
- Swanepoel, L.H., Somers, M.J., van Hoven, W., Schiessmeier, M., Owen, C., Snyman, A., Martins, Q., Senekal, C., Camacho, G., Boshoff, W., and Dalerum, F. (2014). Survival rates and causes of mortality of leopards *Panthera pardus* in southern Africa. *Oryx doi: 10.1017/S0030605313001282*.
- T.M. Caro, C.R. Young, A.E. Cauldwell, D.D.E. Brown,. (2009). Animal breeding systems and big game hunting: Models and application. *Biological Conservation*, Volume 142, Issue.
- Tambling, C. d. (2005). Modelling wildebeest population dynamics: implications of predation and harvesting in a closed system. *42*(431-441).
- Taylor AW, Lindsey PA, Nicholson SK, Relton C, Davies-Mostert HT. (2020). Jobs, game meat and profits: the benefits of wildlife ranching on marginal lands in South Africa. *Biological Conservation 245 (2020) 108561*.
- Taylor, A. L.-M. (2016). *An assessment of the economic, social and conservation value of the wildlife ranching industry and its potential to support the green economy in South Africa*. Andrew Taylor, Peter Lindsey and Harriet Davies-Mostert.
- Thomson R. (2018, September 12). *An Objective Report on the South African Captive Breeding of Lions Industry (CBL) Searching For The Truth... Part 1 & 2*. Retrieved 11 06, 2018, from True Green Alliance: <https://www.mahohboh.org/searching-for-the-truth-part-1/>
- Trinkel M, C. D. (2011). Inbreeding depression increases susceptibility to bovine tuberculosis in lions: an experimental test using an inbred-outbred contrast through translocation. *47*(pp. 494-500).
- Trinkel M, F. P. (2010). Inbreeding and density-dependent population growth in a small, isolated lion population. *Animal Conservation*, 13, 374-382.
- UNEP-WCMC. (2013). Assessing potential impacts of trade in trophies imported for hunting purposes to EU-27 on conservation status of Annex B species. *Part 2: Discussion and case studies. Prepared for the European Commission by UNEP-WCMC. Cambridge, UK. 34 pp.*
- Van der Merwe, M. S. (2017). The economic significance of lion breeding operations in the South African Wildlife Industry. *International Journal of Biodiversity and Conservation*, 9(11), 314-322.
- van der Merwe, P. (2018). *Counting the contribution of hunting to South Africa's economy*. Retrieved from <https://theconversation.com>: <https://theconversation.com/amp/counting-the-contribution-of-hunting-to-south-africas-economy-106715>
- van der Vyver, C. (2017, October). *Management plan for the captive lion industry in South Africa*. Retrieved 11 08, 2018, from [www.sapedators.co.za](http://www.sapedators.co.za): <http://www.sapedators.co.za/images/photos/SAPA-FINAL-MANAGEMENT-PLAN-FOR-CAPTIVE-LIONS-Oct2017.pdf>
- Van Norman, T. (2017). Email correspondance - Permits U.S. Fish and Wildlife Services.

## WILDLIFE TRADE BANS – PAVING THE WAY TO EXTINCTION

- Vermaak, M. (2016). *Canine Distemper outbreak at Vaalwater under control*. Retrieved 13 February 2018, from Die Pos: <http://www.diepos.co.za/articles/news/36140/2016-04-01/canine-distemper-outbreak-at-vaalwater-under-control>
- Williams ST, Williams KS, Lewis BP, Hill RA. (2017). Population dynamics and threats to an apex predator outside protected areas: implications for carnivore management. *R. Soc. open sci.* 4: 161090.
- Williams VL, N. D. (2015). *Bones of contention: an assessment of the South African trade in African Lion Panthera leo bones and other body parts*. Cambridge, UK & WildCRU, Oxford, UK.: TRAFFIC.
- Worldometer. (2020, May 30). *Worldometer*. Retrieved from <https://www.worldometers.info/world-population/south-africa-population/>