



IMEL
INSTITUTE OF MARINE
& ENVIRONMENTAL LAW

PROTECTION OF THE AFRICAN LION

A Critical Analysis of the Current International Legal Regime

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Submission: Minor Dissertation
Qualification: Masters in Philosophy: Specialisation in Marine and Environmental law
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Word Count: 24 989

Research dissertation presented for the approval of Senate in fulfillment of part of the requirements for the Master's in Philosophy specialising in Marine and Environmental Law in approved courses and a minor dissertation. The other part of the requirement for this qualification was the completion of a programme of courses.

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Abstract

The African lion is in danger of rapid population decline and possible extinction in the near future. Two decades ago there was an abundance of African lions, roughly 100 000, on the continent. But at present there are less than 32 000, some even believe there to be as little as 15 000, left. This decline is mainly due to threats arising from habitat loss, retaliatory and traditional killing, the trophy hunting industry and trade related issues. Consequently, African lions are listed as 'vulnerable' on the International Union for Conservation of Nature Red List of Threatened Species. This listing is being contested by commentators who believe that the species now requires an 'endangered' status. African lion populations, and the threats to the species, extend across state boundaries. Therefore, international law is of particular importance in providing conservation and protection measures to the species. Creating conservation obligations at a global level, allows for more uniform action, implementation and enforcement of legislation at regional and local levels. This dissertation looks at each threat to the African lion population in detail. Then, an assessment is made as to whether there is an international legal regime pertaining to each of these threats, and whether that regime is adequate. There has been an increase in arguments that the international legal framework pertaining to the African lion is in fact unacceptable for the protection of the species. This dissertation provides some clarity on the current international and regional legal regime pertaining to the African lion, and addresses both the positive and negative aspects of this regime. Consequently, it is found that the international legal regime for the African lion is ineffective in achieving their protection and survival. Recommendations are made on what needs to change, and the best way forward, through an international legal lens. The security and viability of the African lion is uncertain, and legal protection of the species needs to be clear to start ensuring their survival in the future. African lions are already regionally endangered in some parts of Africa, and the threats to the species are only increasing. Therefore, it is obvious that some legal changes need to be made, to ensure greater protection of the African lion, at an international level.

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List of Abbreviations/Acronyms

African Convention	African Convention on the Conservation of Nature and Natural Resources
CBD	Convention on Biological Diversity
CoP	Conference of the Parties
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
IUCN	International Union for the Conservation of Nature
Lusaka	Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora
NLP	National Legislation Project
RAMSAR	Convention on Wetlands of International Importance especially as Waterfowl Habitat
Rotterdam	Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
SADCP	Southern African Development Community Protocol on Wildlife Conservation and Law Enforcement
TEAC	Treaty Establishing the East African Community
Task Force	Task Force for Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora
UNCCD	United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WHC	Convention Concerning the Protection of the World Cultural and Natural Heritage
WHS	World Heritage Site

CHAPTER 1: INTRODUCTION

Plants and animals have traditionally been perceived by states as resources that are capable of self-renewal if existing populations are conserved.¹ However, many animal species are under increasing threats from human populations, and preservation of a species is not as simple as traditionally believed.² There are examples from all over the world of our failure to protect invaluable species from extinction due to the complexity of ensuring their survival.³ Factors such as habitat, prey availability and ecosystem health play a fundamental role in species survival.⁴ Legislation, both domestic and international, is put in place to try and remedy threats to species before it is too late to save them. The African lion (*Panthera leo*) is one such species that needs protection across its range, in order to ensure its survival in the wild.

The African lion has been subject to increasing attention from the global community due to growing threats to the species.⁵ The International Union for the Conservation of Nature (IUCN) listed the African lion as ‘vulnerable’ in 1996 with a declining population trend.⁶ This ‘Red List’ classification lists species in terms of their threatened or endangered status globally.⁷ A ‘vulnerable’ listing means that a species is not yet critically endangered or endangered, but is facing a high risk of extinction in the wild in the future.⁸ Despite this listing, there has been a growing concern that African lions need more international protection.⁹ This is due to an increase of threats to the

¹ Fitzmaurice M, Ong D & Merkouris P *Research Handbook on International Environmental Law* (2010) Edward Elgar Publishing Limited United Kingdom 519.

² Ibid.

³ Costello M, May R & Stork N “Can We Name Earth’s Species Before They Go Extinct” 2013 (339) *Science* 414.

⁴ Fitzmaurice et al *Handbook* 519.

⁵ Bauer H, Nowell K & Packer C “Panthera leo IUCN Red List of Threatened Species” 2014 *International Union for the Conservation of Nature* <http://www.iucnredlist.org/details/15951/0> (accessed 10.08.2014).

⁶ Ibid.

⁷ IUCN “1994 Categories and Criteria Version 2.3” 2014 *International Union for the Conservation of Nature: Red List* http://www.iucnredlist.org/static/categories_criteria_2_3 (accessed 10.08.2014); Bauer et al 2014 *International Union for the Conservation of Nature*.

⁸ Ibid.

⁹ Place J, Flocken J, Travers W, Waterland S, Telecky T, Kennedy C & Goyenechea A “Petition to List the African Lion (*Panthera leo*) as Endangered Pursuant to the U.S. Endangered Species Act” 2011 *International Fund for Animal Welfare*

species, which extend across state boundaries.¹⁰ Although domestic legislation occurs in some range states, for a species such as the African lion whose population dynamics extend across national boundaries, international law is of particular importance.¹¹ Creating conservation obligations at a global level, allows for more uniform action, implementation and enforcement of legislation at regional and local levels.¹² Therefore it is important to assess whether there is an international legal regime pertaining to the protection and conservation of the African lion, and whether that regime is adequate. This regime can then be implemented locally.

This dissertation will ascertain whether the current international legal regime for the African lion is effective in achieving protection and survival of the species. To fully address the complexities of this primary research aim, one must first understand some subsidiary context and background, which is detailed below. The importance of the African lion and the threats that the species is exposed to are the first such aspects of research. The ecological, cultural and economic importance of the species are outlined. Then the main threats to the species are investigated. These threats include retaliatory and traditional killing, prey and habitat loss, the trophy hunting industry and trade related issues.¹³ The concern over these threats has resulted in the call for increased international measures and protection for the African lion.¹⁴ This concern first arose in 2004 when the Kenyan Government proposed up-listing the African lion from Appendix II of the Convention on International Trade In Endangered Species of Wild Fauna and Flora (CITES)¹⁵ to Appendix I, which results in increased protection in terms of trade.¹⁶ This

<http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> (accessed 10.08.2014) 6.

¹⁰ Ibid.

¹¹ Kasiki S & Hamunyela E "CITES: Panthera Leo- Report Of Kenya And Namibia" 2014 *Twenty-seventh meeting of the Animals Committee Veracruz AC27 Doc.24.3.3.* 14; IUCN "Species Range" 2014 *International Union for the Conservation of Nature: Red List Species Range* <http://maps.iucnredlist.org/map.html?id=15951> (accessed 06.10.2014).

¹² Sands P & Peel J *Principles of International Environmental Law* (2012) Cambridge University Press United Kingdom 512.

¹³ See Chapter 2.

¹⁴ Place et al 2011 *IFAW* 45.

¹⁵ Convention on International Trade in Endangered Species of Wild Fauna and Flora 12 ILM 1085 (1973) (CITES).

¹⁶ CITES "Consideration of Proposals for Amendment of Appendices I and II" 2004 *CoP13* http://www.cites.org/common/cop/13/raw_props/KE-Lion.pdf (accessed 07.10.2014).

Proposal created awareness around the declining status of African lion populations. Subsequently, organisations for animal welfare and lion conservation have started demanding increased protection of the species.¹⁷

Further research into relevant legal instruments will ascertain whether the current international legal regime includes any measures that provide for the protection of the African lion, and if so, whether these measures are effective against the mentioned threats. These findings also address whether the call for increased protection has any legitimacy or not. This dissertation will then address both the positives and negatives of the current international legal regime, and recommendations will be made as to the best way forward through an international legal lens.

1.1 Value of the African lion

African lions are valuable in many respects. Firstly, for their important role in balancing ecosystems, secondly for their intrinsic cultural and traditional value, and thirdly for their economic value to range states.¹⁸

As an apex predator, the African lion plays a vital role in the wild.¹⁹ Their ability to kill large herbivores and mid-sized carnivores ensures a balanced food chain and top-down structuring of an ecosystem.²⁰ A change in abundance and distribution of African lions could have a detrimental effect on ecosystems.²¹

African lions are not only important because of their predatory role. Throughout history lions have held cultural and traditional significance.²² They appear as symbols of strength, as well as featuring in proverbs, sayings and tales.²³ Actions of the global community reflect this intrinsic value. A registered charity for lion conservation and research, *Lion Aid*, presented a

¹⁷ Roberts A "Will Cites Ignore Its Responsibility to Contribute to African Lion Conservation" 2004 *Animal Welfare Institute* <https://awionline.org/content/will-cites-ignore-its-responsibility-contribute-african-lion-conservation> (accessed 07.10.2014).

¹⁸ Braun D "Lion numbers plunge as African wilderness succumbs to human pressure" 2012 *National Geographic* <http://newswatch.nationalgeographic.com/2012/12/06/lion-numbers-plunge-as-african-wilderness-succumbs-to-human-pressure/> (accessed 08.10.2014).

¹⁹ *Ibid.*

²⁰ Nowell K & Bauer H "Regional Lion Conservation Strategy for Eastern and Southern Africa" 2006 *IUCN SSC Cat Specialist Group 7*.

²¹ *Ibid.*

²² *Ibid.*

²³ *Ibid.*

concept to the United Nations Educational, Scientific and Cultural Organisation (UNESCO).²⁴ This concept was around listing animals of great cultural importance as World Heritage Species.²⁵ Due to the global symbolism and iconography of the lion, *Lion Aid* proposed that lions already fulfil the 6th criterion of the Convention Concerning the Protection of the World Cultural and Natural Heritage (WHC) and should be listed as a World Heritage Species.²⁶ The criterion states:

“To be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance”²⁷

It is evident that the WHC will not extend its role and mandate to include species of World Heritage status.²⁸ However, the attempt by the charity shows just how much the lion is valued.²⁹

Besides their ecological and cultural importance, the African lion holds a high economic value for range states.³⁰ As one of the ‘big five’ species of hunting, African lions generate large tourist interest and revenue for range states.³¹ Additionally, ecotourism - non-consumptive tourism for purely photographic and viewing purposes - is critical for many developing African states as a generator of foreign income.³² For example, in Amboseli National Park, Kenya, it has been estimated that a male lion is worth US \$128 750 per year in tourist income.³³

²⁴ LionAid Charity “The Concept of World Heritage Species status for Lions” 2012 *LionAid* <https://www.lionaid.org/download/lionaid-world-heritage-sites-iconic-heritage-species-lion.pdf> (accessed 11.08.2014).

²⁵ *Ibid.*

²⁶ The Convention Concerning the Protection of the World Cultural and Natural Heritage 11 ILM 1358 (1972) (WHC).

²⁷ UNESCO “World Heritage Centre” 2014 *The Criteria For Selection-Criterion vi* <http://whc.unesco.org/en/criteria/> (accessed 11.10.2014).

²⁸ Stoinski T, Steklis H & Mehlman P *Conservation in the 21st Century* (2008) Springer New York 291.

²⁹ *Ibid.*

³⁰ Nowell & Bauer 2006 SSC 7.

³¹ *Ibid.*

³² Braun 2012 *NG*; Nilson G *Endangered Species Handbook* (2005) Animal welfare institute Washington DC.

³³ Gittleman J, Funk S, Macdonald D & Wayne R *Conservation Biology: Carnivore Conservation* 5th ed (2003) Cambridge University Press United Kingdom 293.

1.2 Current state of African lion populations

There is great difficulty in conducting lion population censuses, and there is great divergence in lion population estimates.³⁴ However, it is widely agreed that there is a downward trend in African lion populations.³⁵ The historical distribution of the African lion encompassed almost the entire African Continent.³⁶ Regional extinction of the species occurred in North Africa prior to 1950.³⁷ Concerns over conserving the species started to arise in 1966 when the African lion was listed as 'vulnerable' on the IUCN Red List of Threatened Species.³⁸ Population estimates dropped from a million in pre-colonial times to 200 000 in 1975, and less than 100 000 in the 1990s.³⁹ Today, the most accurate population estimate by the IUCN is that there are less than 29 665 free-ranging African lions left on the continent.⁴⁰

African lions found in West and Central Africa are highly threatened.⁴¹ There have been recent local extinctions in the region, with a range reduction of 85 per cent.⁴² The African lion population in West Africa has been listed as regionally endangered, by the IUCN, with an estimated number of 850 mature individuals remaining in the wild.⁴³

For African lions to have a high survival rate in the future, there need to be multiple populations connecting across ecosystems.⁴⁴ These populations need to have a large number of individuals to conserve genetic diversity and

³⁴ This is due to the difficulty of identification, requiring high-resolution cameras and an unobstructed view. Adding to this, carnivores are also shy and prefer to stay hidden. See Braun 2012 *NG*; Bauer H & Van Der Merwe S "Inventory of free-ranging lions *Panthera leo* in Africa" 2004 (38) *Oryx-International Journal of Conservation* 26.

³⁵ Place et al 2011 *IFAW* 12.

³⁶ Henschel P, Azani D, Burton C, Malanda G, Saidu Y, Sam M & Hunter L "Lion Status updates from five range countries in West and Central Africa" 2010 (52) *CATnews* 34.

³⁷ *Ibid.*

³⁸ *Ibid.*

³⁹ Hazzah L, Mulder M & Frank L "Lions and Warriors: Social factors underlying declining African lion populations and the effect of incentive-based management in Kenya" 2009 (142) *Biological Conservation* 2428; Place et al 2011 *IFAW* 12.

⁴⁰ Hazzah et al 2009 (142) *BioCon* 2428.

⁴¹ There are genetic differences between lions in East and Southern Africa, and those in West and Central Africa. However, for the purpose of this paper this distinction is not critical as the lions in both areas are threatened. See Riggio J, Jacobson A, Dollar L, Bauer H, Becker M, Dickman A, Funston P, Groom R, Henschel P, de Jongh H, Lichtenfeld L & Pimm S "The size of savannah Africa: a lion's (*Panthera leo*) view" 2013 (22) *Biodiversity Conservation* 18; Henschel et al 2010 (52) *CATnews* 34.

⁴² *Ibid.*

⁴³ Bauer et al 2014 *IUCN*; Place et al 2011 *IFAW* 11.

⁴⁴ Place et al 2011 *IFAW* 14.

avoid inbreeding, coupled with this is the importance of male dispersal for genetic variation.⁴⁵ In 2010 African lions were found in 27 countries across Africa, three countries fewer than the documented 30 countries in 2008.⁴⁶ This shows the deteriorating status of the species and their range.⁴⁷

1.3 Aim and structure

As stated above, the primary purpose of this dissertation is to establish whether the international legal regime for the African lion is effective in the protection and survival of the species. The importance, and the decreasing population trend, of the African lion have been highlighted. Chapter 2 provides details on the main threats that the African lion is exposed to, as well as the way these threats are resulting in population decline. Chapter 3 then considers whether the international and regional legal regime caters for each of these threats, and whether it is effective in achieving protection of the African lion species. Chapter 4 critically analyses the above-mentioned legal regime by weighing up both the positives and negatives of the regime in the protection of the African lion. Finally, chapter 5 provides some recommendations, and a conclusion on the way forward for the international legal regime in protecting the species from further decline.

⁴⁵ Bauer et al 2014 *IUCN*.

⁴⁶ Place et al 2011 *IFAW* 15.

⁴⁷ *Ibid*.

CHAPTER 2: THREATS TO THE AFRICAN LION'S EXISTENCE

2.1 Habitat loss and prey scarcity

2.1.1 Habitat loss

Historically, African lions occurred in all habitats except for very dry deserts or very moist rainforests.⁴⁸ They are now only found in savannah habitats across Sub-Saharan Africa.⁴⁹ This area covers 13.5 million km².⁵⁰ Of this, only 3.4 million km² is suitable to support African lions, and just 1.08 million km² of this area is classified as protected by the IUCN.⁵¹ The density of lion populations decrease with increasing distance from conservation areas.⁵² Therefore they are dependent on areas where they, as well as their habitat, is protected.⁵³ Thus African lions are a species that appear to have a low ecological resilience to human caused habitat fragmentation.⁵⁴ Therefore, habitat loss becomes a great risk to the species.⁵⁵

Activities that have altered lion habitat are mostly agriculture, livestock grazing and human developments.⁵⁶ The human population of Sub-Saharan Africa has increased from 190 million people in 1950, to over 900 million in 2013, with predictions of 1.75 billion by 2050.⁵⁷ To support this growth, land and resources are under increasing pressure for development and the

⁴⁸ Bauer H, Garreau J, Nowell K, Sogbohossou E, Tehou A & Won Wa Musiti B "Conservation Strategy for the Lion in West and Central Africa" 2006 *IUCN SSC Cat Specialist Group* 10.

⁴⁹ Ibid; Kasiki & Hamunyela 2014 *Animals Committee* 4.

⁵⁰ Riggio et al 2013 (22) *BioCon* 18.

⁵¹ Ibid at 29.

⁵² Winterbach H, Winterbach C, Somers M & Hayward M "Key Factors and related principles in the conservation of large African carnivores" 2012 (43) *Mammal Review* 92

⁵³ Ibid.

⁵⁴ Ibid. Ecological resilience is a measure of the ability that a species has, to absorb changes or disturbances in its environment, before it needs to change its structure or state. See Adger W "Social and ecological resilience: are they related?" 2000 (24) *Progress in Human Geography* 350.

⁵⁵ Ibid.

⁵⁶ Place et al 2011 *IFAW* 18.

⁵⁷ Ibid; *The World Bank Group: Data* <http://data.worldbank.org/region/sub-saharan-africa> (accessed 06.09.2014).

meeting of people's needs.⁵⁸ This is causing significant, often irreparable, damage to lion habitat.⁵⁹

In East Africa, nomadic pastoralist communities used to migrate seasonally following the rains with their herds.⁶⁰ But with recent government land policies and population growth there has been a shift to land privatisation, crop production and permanent human settlements.⁶¹ This change has had devastating effects on lion habitat in terms of fragmentation, conversion and access.⁶² The exploitation of natural resources such as wood and mineral resources as well as the construction of dams and irrigation schemes weighs heavily on the Sub-Saharan environment.⁶³ In Guinea one of the main threats to the lion population of the country is habitat loss due to expansion of agricultural and forest exploitation, bushfires and the extraction of gold and diamonds.⁶⁴ In West and Central Africa the practice of swidden cultivation is also distressing as it involves clearing and burning areas of ground to fertilise soil, and provide for livestock grazing.⁶⁵ Livestock husbandry is also a dominant activity in the area and a way of life for rural populations.⁶⁶ It is an unsustainable activity, often associated with land and habitat degradation.⁶⁷ However, it is gaining popularity as the amount of cattle a family owns is often directly linked to their wealth.⁶⁸

Thus, habitat loss is closely linked with land use change, and has a direct impact on African lion survival.⁶⁹ Due to loss of habitat, connections for lions between various parks and conservancies also no longer exist.⁷⁰ This creates difficulty for gene transfer between African lion prides and promotes

⁵⁸ Nowell K & Jackson P "Status Survey and Conservation Action Plan: Wild Cats" 1996 *IUCN/SSC Cat Specialist Group* 149.

⁵⁹ Place et al 2011 *IFAW* 18.

⁶⁰ Schuette P, Creel S & Christianson D "Coexistence of African lions, livestock, and people in a landscape with variable human land use and seasonal movements" 2013 (157) *Biological Conservation* 148.

⁶¹ *Ibid.*

⁶² *Ibid.*

⁶³ Bauer et al 2006 *SSC* 19.

⁶⁴ Kasiki & Hamunyela 2014 *Animals Committee* 5.

⁶⁵ Bauer et al 2006 *SSC* 18.

⁶⁶ *Ibid.*

⁶⁷ *Ibid.*

⁶⁸ *Ibid.*

⁶⁹ Place et al 2011 *IFAW* 18.

⁷⁰ Winterbach et al 2012 (43) *MR* 96.

inbreeding.⁷¹ The lion population in South Africa, for example, is kept mostly in protected areas.⁷² These lions are fairly isolated from other populations across the continent and so concerns of gene heterogeneity are high.⁷³

African lions have had to expand their home range due to this loss of habitat.⁷⁴ A home range is the area used by lions for their activities of hunting prey, mating and caring for their young.⁷⁵ Home range size is reflected in the quality of surrounding habitat and food availability.⁷⁶ Low quality habitat and insufficient food result in larger home ranges.⁷⁷

This expansion of home ranges, linked with increases in land use change outside protected areas, and on the edge of these areas,⁷⁸ allows for more African lion contact with domestic animals.⁷⁹ This contact results in the spreading of disease, which becomes a major threat to the survival of African lions.⁸⁰ Desertification further exacerbates this link with human populations.⁸¹ It is predicted that by the year 2025 land degradation through desertification will lead to a loss of two-thirds of all arable land in Africa.⁸² This loss is going to increase competition for land between humans and lions.⁸³

As African countries continue to develop, more lion habitat will be degraded due to human activity. In 2010, the Government of Tanzania began plans to upgrade a gravel road to tarmac across the Serengeti National

⁷¹ Genetic diversity in wildlife ensures long-term viability of populations. It is the raw material that makes evolutionary change possible. Without genetic diversity, populations cannot evolve in response to changes to their environment. If all members of the populations share the same genetics that cannot adapt to new threats such as disease or competition, extinction will occur. See Tende T, Hansson B, Ottosson U, Akesson M & Bensch S "Individual Identification and Genetic Variation of Lions from Two Protected Areas in Nigeria" 2014 (9) *PLoS ONE* 6.

⁷² Kasiki & Hamunyela 2014 *Animals Committee* 6.

⁷³ *Ibid.*

⁷⁴ Place et al 2011 *IFAW* 18.

⁷⁵ Tumenta P, van't Zelfde M, Croes B, Buij R, Funston P, Udo de Haes H, De longh H "Changes in lion (*Panthera leo*) home range size in Waza National Park, Cameroon" 2013 (78) *Mammalian Biology* 461.

⁷⁶ *Ibid.*

⁷⁷ *Ibid.*

⁷⁸ Know as the edge effect. See Winterbach et al 2012 (43) *MR* 101.

⁷⁹ *Ibid* at 96.

⁸⁰ *Ibid.*

⁸¹ Bauer et al 2006 *SSC* 19.

⁸² Place et al 2011 *IFAW* 21.

⁸³ *Ibid.*

Park.⁸⁴ The Park is a sensitive ecosystem, home to around 4000 African lions.⁸⁵ This proposed upgrade was purely for socio-economic growth reasons, to decrease the travelling costs of citizens.⁸⁶ Little regard was paid to the effect that construction and development would have within the Park in terms of habitat destruction and damage to the delicate ecosystem.⁸⁷ This development within such an area would surely have great impacts on African lion home ranges and their prey availability.⁸⁸ A non-governmental organisation for Pan-Africa, the African Network for Animal Welfare, challenged the Tanzanian Government on these plans in the East African Court of Justice in 2010.⁸⁹

2.1.2 Prey scarcity

African lions prefer medium to large ungulates as prey.⁹⁰ Lion population density within an ecosystem is often influenced by prey abundance.⁹¹ There has been a decline in prey species, relating to the same habitat degradation and land use change that lions are experiencing.⁹² Transformation of wild habitats into areas for farming is leading to a rapid loss of biodiversity.⁹³ Linked with this is the proximity of wild ungulates to domestic livestock increasing disease transmission to wild populations.⁹⁴ Disease is also transferred directly from livestock to the lions.⁹⁵ As wild prey becomes less abundant and livestock farming increases, lions are driven to farming areas

⁸⁴ *African Network for Animal Welfare (ANAW) v The Attorney General of the United Republic of Tanzania* (9 of 2010) 2014 EACJ Judgment.

⁸⁵ WHC 2014 *Serengeti National Park* <http://whc.unesco.org/en/list/156/> (accessed 06.10.2014).

⁸⁶ *African Network for Animal Welfare (ANAW) v The Attorney General of the United Republic of Tanzania* (9 of 2010) 2014 EACJ Judgment 9.

⁸⁷ *Ibid* at 4.

⁸⁸ *Ibid*.

⁸⁹ The judgment was handed down in June 2014 and will be discussed in Chapter 3. See *Ibid*.

⁹⁰ Ungulates are hoofed herbivorous mammals that range from the size of a buck to a buffalo. See Packer C "Lions" 2010 (20) *Current Biology* 590.

⁹¹ Place et al 2011 *IFAW* 19.

⁹² *Ibid* at 18.

⁹³ *Ibid*.

⁹⁴ Bauer et al 2006 *SSC* 19.

⁹⁵ Winterbach et al 2012 (43) *MR* 96.

for food, out of convenience and well as necessity.⁹⁶ This increases the risk of disease transmission through contact with domestic animals.⁹⁷

This prey scarcity is also due to an increase in hunting activities targeting wild game for consumption and commercial means.⁹⁸ In West and Central Africa, 'bushmeat' is an important source of protein and income for local communities.⁹⁹ Bushmeat consumption is increasing with the increase in human populations in Sub-Saharan Africa. The commercialisation of the bushmeat trade is also having an impact on wild populations of ungulates.¹⁰⁰ Adding to this is that traditional methods are no longer used for hunting in many African countries.¹⁰¹ Due to civil conflict in many countries home to African lions, modern weapons are readily available and used instead.¹⁰² This weapon use has had a damaging impact on all wildlife populations, resulting in an increase in the number of kills, in a smaller amount of time.¹⁰³ This problem is exacerbated by the fact that the illegal trade in bushmeat is increasing which will further deplete the African lions' prey base.¹⁰⁴ This increase in the bushmeat trade has increased the amount of game poachers, which is also a direct threat to lions.¹⁰⁵ It is common practice, for game poachers who come across a lion, to kill the lion in order to reduce competition and ensure easier hunting of their target species.¹⁰⁶

Like habitat, the sizes of African lion home ranges are also negatively correlated with prey abundance.¹⁰⁷ With a decrease in prey abundance, home ranges will increase in size.¹⁰⁸ In Waza National Park, in Cameroon,

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Bauer et al 2006 SSC 19.

⁹⁹ Ibid.

¹⁰⁰ Lindsey P, Balme G, Becker M, Begg C, Bento C, Bocchino C, Dickman A, Diggle R, Eves H, Henschel P, Lewis D, Marnewick K, Mattheus J, McNutt JW, McRobb R, Midlane N, Milanzi J, Morley R, Murphree M, Nyoni P, Opyene V, Phadima J, Purchase N, Rentsch D, Roche C, Shaw J, van der Westhuizen H, Van Vliet N & Zisadza P "Illegal hunting and the bush-meat trade in savanna Africa: drivers, impacts and solutions to address the problem" 2012 *Wildlife Conservation Society report* 5.

¹⁰¹ Place et al 2011 *IFAW* 21.

¹⁰² Ibid.

¹⁰³ Ibid.

¹⁰⁴ Kasiki & Hamunyela 2014 *Animals Committee* 5.

¹⁰⁵ Place et al 2011 *IFAW* 21.

¹⁰⁶ Ibid.

¹⁰⁷ Tumenta et al 2013 (78) *MB* 462.

¹⁰⁸ Ibid.

the home range sizes of the lion population increased by 58.6 per cent over 13 years.¹⁰⁹ Commentators suggest that this increase is a reflection of prey scarcity in the area, which has decreased by approximately 82 per cent from 2000 to 2007.¹¹⁰

2.2 Retaliatory and traditional killing

As outlined above, the prey of the African lion is decreasing in availability. Thus, lions are turning to community and commercial livestock for food.¹¹¹ Many herbivores migrate seasonally, and in the past, lions used to follow these migrations.¹¹² However, due to livestock abundance near to, and often within, lions expanding home ranges, lions are no longer following these migrations, and rather stay in areas close to livestock.¹¹³

Thus, African lions pose a great threat to local livelihoods.¹¹⁴ There are problems of livestock predation, as well as human attacks.¹¹⁵ Both these issues result in retaliatory killing of lions.¹¹⁶ Some governments, such as the Government of Botswana, compensate farmers for their losses.¹¹⁷ However, this compensation is often insufficient for replacement of livestock and it is a lengthy process to obtain.¹¹⁸ Thus killing the 'problem' lions is an easier option for farmers.¹¹⁹

Retaliatory killing of lions is also caused by an increasing number of lion attacks on humans.¹²⁰ Out of all carnivores in Africa, lions kill the most

¹⁰⁹ Ibid at 464.

¹¹⁰ Ibid.

¹¹¹ Winterbach et al 2012 (43) *MR* 94.

¹¹² Valeix M, Hemson G, Loveridge A, Mills G & Macdonald D "Behavioural adjustments of a large carnivore to access secondary prey in a human-dominated landscape" 2012 (49) *Journal of Applied Ecology* 77.

¹¹³ Ibid.

¹¹⁴ Ibid at 73. In Cameroon lion predation on livestock is costly, it is estimated that 1700 livestock, valued at US \$130 000, are attacked annually by lions. See Bauer H "Lion Conservation in West and Central Africa" 2003 *Carnivore Conservation* http://www.carnivoreconservation.org/files/thesis/bauer_2003_phd.pdf (accessed 07.09.2014) 61.

¹¹⁵ Packer C & Kissui B "Managing Human-Lion Conflicts" 2007 *Transactions of the 72nd North American Wildlife and Natural Resources Conference* 4.

¹¹⁶ Ibid.

¹¹⁷ Valeix et al 2012 (49) *JAE* 80.

¹¹⁸ Ibid.

¹¹⁹ Ibid.

¹²⁰ Packer & Kissui 2007 *Transactions* 8.

people.¹²¹ In Tanzania, for example, in the 1990s there were around 30 attacks per year, but as of 2004 attacks have escalated to over 100 people per year.¹²² In this area the attacks are often associated with wild prey scarcity forcing lions to hunt closer to communities, where they come into contact with humans.¹²³ Thus, human attacks are often unintentional. However, there are still dire consequences for the species as the attacks result in retaliatory killing of lions through poisoning, trapping and shooting.¹²⁴

In most cases lions that attack or kill humans are killed during the incident, or will be hunted and killed if they are found.¹²⁵ For example, nearly 200 lions are killed each year in Tanzania in response to livestock and human attacks.¹²⁶ Often rural communities are ill equipped to find and kill these lions.¹²⁷ So, the communities resort to lacing half eaten carcasses with poison, which has detrimental effects on more than one lion, and other wildlife too.¹²⁸ The recent availability of the cheap pesticide Carbofuran, used in agriculture, has made lion elimination even easier for many communities.¹²⁹

Local communities believe that they gain little benefit from tolerating lions.¹³⁰ The loss of their livelihoods by lions results in indiscriminate killing with little understanding of the impact on the greater ecosystem.¹³¹ In Kenya's Amboseli National Park between 1990 and 1993, the local community surrounded the Park and eradicated the entire lion population of 2429 lions.¹³² This eradication was in response to livestock predation and their loss of grazing land to the Park.¹³³ Lions re-populated the Park from surrounding areas, but the killing continued with 140 lions speared or

¹²¹ Winterbach et al 2012 (43) *MR* 92.

¹²² Packer & Kissui 2007 *Transactions* 8.

¹²³ *Ibid* at 9.

¹²⁴ Nowell & Bauer 2006 *SSC* 21.

¹²⁵ Packer & Kissui 2007 *Transactions* 8.

¹²⁶ Kasiki & Hamunyela 2014 *Animals Committee* 7.

¹²⁷ Packer & Kissui 2007 *Transactions* 10.

¹²⁸ *Ibid*.

¹²⁹ Hazzah et al 2009 (142) *BioCon* 2429.

¹³⁰ Hazzah L, Dolrenry S, Naughton L, Edwards C, Mwebi O, Kearney F & Frank L "Efficacy of Two Lion Conservation Programs in Maasailand, Kenya" 2014 (28) *Conservation Biology* 852.

¹³¹ *Ibid*.

¹³² Hazzah et al 2009 (142) *BioCon* 2429.

¹³³ *Ibid*.

poisoned between 2001 and 2006.¹³⁴ In Namibia conflict between humans and lions is also the main cause of lion mortality.¹³⁵ In Zimbabwe retaliatory killing accounts for 40 per cent of recorded lion mortalities.¹³⁶

The blatant killing of lions is also done for ceremonial and traditional reasons.¹³⁷ The traditional Maasai culture has the practice of *Olamayio*.¹³⁸ This is when a young warrior proves his courage by killing a 'problem' lion.¹³⁹ This kill brings prestige to the warrior and represents his manhood.¹⁴⁰ Furthermore, traditional Sukuma men in the Katavi-Rukwa ecosystem, in Tanzania, are adorned with gifts and become prestigious local figures if they kill a lion for retaliatory purposes.¹⁴¹ These men are seen as local heroes for ridding the area of dangerous predators.¹⁴² Recently however, Sukuma men are travelling far distances in search of lions to kill, for no reason other than gaining status and prestige in the community.¹⁴³ These men are killing lions that pose no threat to communities, and so, have little regard for lion population decline.¹⁴⁴

2.3 Trophy hunting industry

2.3.1 Hunting of wild lions

Trophy hunting entails killing an animal and stuffing the carcass to display the animal as a trophy.¹⁴⁵ Trophy hunting brings in foreign currency and is often used as an economic incentive for local communities to support wildlife

¹³⁴ Ibid.

¹³⁵ Kasiki & Hamunyela 2014 *Animals Committee* 6.

¹³⁶ Ibid at 8.

¹³⁷ Fitzherbert E, Caro T, Johnson P, Macdonald D & Mulder M "From Avengers to Hunters: Leveraging collective action for the conservation of endangered lions" 2014 (174) *Biological Conservation* 84.

¹³⁸ Packer & Kissui 2007 *Transactions* 5.

¹³⁹ Ibid; Hazzah et al 2009 (142) *BioCon* 2429.

¹⁴⁰ Ibid.

¹⁴¹ Fitzherbert et al 2014 (174) *BioCon* 84.

¹⁴² Ibid.

¹⁴³ Ibid at 85.

¹⁴⁴ Ibid.

¹⁴⁵ Hargreaves R "Countering the Moral and Ethical Argument for Canned Hunting of Captive Bred Lions in South Africa" 2010 (3) *Journal of the WildCat Conservation Legal Aid Society* 8.

conservation.¹⁴⁶ However, this industry often provides only short-term gains, and as profits increase so do the risks of overexploitation of the species.¹⁴⁷

This industry lacks the structure and transparency to ensure sustainability of African lion populations.¹⁴⁸ Often, lion hunting concessions are divided randomly and quotas are increased with no scientific support.¹⁴⁹ An accurate estimate of lion population numbers is difficult to ascertain, as census methods are expensive, time consuming and require skill.¹⁵⁰ Thus, lion hunting quotas are often inaccurate and unrealistic.¹⁵¹

In Sub-Saharan Africa trophy hunting of lions occurs in 15 countries.¹⁵² Tanzania has the highest prevalence of trophy hunting with over 250 lions hunted per year.¹⁵³ It has been estimated that unsustainable trophy hunting has reduced the wild African lion population by 30 per cent.¹⁵⁴ If unsustainable quotas continue to be set, African lion populations could decrease unnoticed.¹⁵⁵

Trophy hunting gives rise to further threats through the dominant selection of male targets.¹⁵⁶ Hunters want a large male trophy, but these males are often pride holders in the wild.¹⁵⁷ Once these males are killed, other males take over the pride and commit infanticide to the deceased male's offspring, resulting in unnecessary population decline.¹⁵⁸ Lionesses defending their cubs are at times killed as well.¹⁵⁹ Carcass bait is also used

¹⁴⁶ Whitman K, Starfield A, Quadling H & Packer C "Modelling the Effects of Trophy Selection and Environmental Disturbance on a Simulated Population of African Lions" 2007 (21) *Conservation Biology* 592.

¹⁴⁷ *Ibid* at 593.

¹⁴⁸ *Ibid*.

¹⁴⁹ *Ibid*.

¹⁵⁰ Loveridge A, Packer C & Dutton A "Science and the Recreational Hunting of Lions" in Dickson B, Hutton J & Adams W (eds) *Recreational Hunting, Conservation and Rural Livelihoods* (2009) Blackwell Publishing Ltd London 115.

¹⁵¹ *Ibid*.

¹⁵² *Ibid* at 110.

¹⁵³ *Ibid* at 111.

¹⁵⁴ Kiffner C "African Lions and the Trophy Hunting Dilemma" 2008 (25) *Endangered Species Update* 2.

¹⁵⁵ Loveridge et al "Science and the Recreational Hunting of Lions" in *Recreational Hunting* 115.

¹⁵⁶ Kiffner 2008 (25) *Endangered* 2.

¹⁵⁷ *Ibid*.

¹⁵⁸ *Ibid*.

¹⁵⁹ Kasiki & Hamunyela 2014 *Animals Committee* 14.

to attract lions into an area.¹⁶⁰ Often it is the younger, more inquisitive, males that approach the bait and are killed.¹⁶¹ This is problematic as studies have found that hunting of lions is only sustainable when males are over the age of 6 as this allows time for reproduction.¹⁶² The behaviour of some hunters is also questionable when they are unsatisfied with their hunt.¹⁶³ In Zimbabwe, when no kill has been made, bait is used to lure male lions out of Hwange National Park and into adjacent hunting areas where trophy hunters can kill them.¹⁶⁴

Many countries ban trophy hunting of female African lions due to the negative impact it has on populations.¹⁶⁵ Dependent cubs will die and it also results in a loss of reproductive individuals.¹⁶⁶ However, some states such as Namibia do have female hunting quotas.¹⁶⁷ It has been found that killing less than three per cent of reproductive females will expose lion populations to an overall decline.¹⁶⁸

2.3.2 Hunting of captive-bred lions

The captive-bred lion industry has grown significantly.¹⁶⁹ The original intention of this industry was for rehabilitation and conservation purposes, but the industry is now mainly for supplying hunting activities.¹⁷⁰ This industry is now driven by financial motivation.¹⁷¹ The industry, also known as 'put and take', involves breeding lions in captivity to be hunted in small, fenced areas

¹⁶⁰ Whitman et al 2007 (21) *CB* 592.

¹⁶¹ Ibid.

¹⁶² Ibid; Kasiki & Hamunyela 2014 *Animals Committee* 14.

¹⁶³ Kiffner 2008 (25) *Endangered* 3.

¹⁶⁴ Ibid.

¹⁶⁵ Loveridge et al "Science and the Recreational Hunting of Lions" in *Recreational Hunting* 114.

¹⁶⁶ Ibid.

¹⁶⁷ Lindsey P, Balme G, Funston P, Henschel P, Hunter L, Madzikanda H, Midlane N & Nyirenda V "The Trophy Hunting of African Lions: Scale, Current Management Practices and Factors Undermining Sustainability" 2013 (8) *PLoS ONE* 2.

¹⁶⁸ Loveridge et al "Science and the Recreational Hunting of Lions" in *Recreational Hunting* 114.

¹⁶⁹ Lindsey P, Alexander R, Balme G, Midlane N & Craig J "Possible relationships between the South African captive-bred lion hunting industry and the hunting and conservation of lions elsewhere in Africa" 2012 (42) *South African Journal of Wildlife Research* 18.

¹⁷⁰ Panel of Experts "Professional and Recreational Hunting in South Africa" 2005 *Report to the Minister of Environmental Affairs and Tourism* http://www.huntingreport.com/images2/pdf/Final_Draft_Panel_of_Expert_Report_to_DEAT.pdf (accessed 06.09.2014) 42.

¹⁷¹ Ibid at xi.

with no chance of escape, otherwise known as canned hunting.¹⁷² In 2008 in South Africa an estimated number of 3596 lions were kept in 174 breeding facilities, generating revenue of US \$11.2 million in hunts.¹⁷³

The increasing popularity of canned hunts is due to three main differences with wild lion hunts.¹⁷⁴ Firstly, wild hunts are more expensive and have a longer duration than canned hunts.¹⁷⁵ Secondly, canned hunts guarantee a kill and a trophy, whereas wild hunts are not always successful.¹⁷⁶ Thirdly, captive-bred lion trophies are larger, due to consistent food in captivity and selective breeding, than those in the wild.¹⁷⁷

This industry could have devastating impacts on the conservation of wild lions.¹⁷⁸ Due to the increase in canned hunting, the demand for wild lion hunts may decrease, thereby reducing conservation incentives for wild lions.¹⁷⁹ In terms of genetic threats, selective breeding occurs in the industry to ensure larger trophies for hunters.¹⁸⁰ This genetic manipulation will have a negative impact if captive-bred lions breed with wild populations.¹⁸¹ There is also the problem of inbreeding and abuse at these facilities, as animals are bred for hunting and not conservation.¹⁸² Breeders do not keep records of breeding lines and so these lions cannot be incorporated into wild conservation programmes if need be.¹⁸³

Another growing threat from this practice is the illegal poaching of wild lions to add to breeding facilities.¹⁸⁴ Exact numbers around the rate at which this occurs are unknown, and thus uncontrolled, which poses an even greater risk to the species.¹⁸⁵ Between 1998 and 2008 South Africa imported

¹⁷² Lindsey et al 2012 (42) SAJWR 12.

¹⁷³ Ibid at 18.

¹⁷⁴ Ibid.

¹⁷⁵ Ibid.

¹⁷⁶ Ibid.

¹⁷⁷ Ibid.

¹⁷⁸ Ibid at 12.

¹⁷⁹ Ibid.

¹⁸⁰ Ibid at 18.

¹⁸¹ Ibid at 19.

¹⁸² Panel of Experts 2005 *Report* 23.

¹⁸³ Ibid.

¹⁸⁴ Ibid.

¹⁸⁵ Ibid at 21.

74 wild source lions from various countries for commercial purposes.¹⁸⁶ It has been speculated that the lions are being used for the purpose of canned hunting as captive breeders or trophies.¹⁸⁷ It is believed that in South Africa 80 per cent of commercial lion kills are from canned hunting practices.¹⁸⁸

2.4 Trade

2.4.1 Legal trade activities

Lions, their parts and derivatives are traded at both local and international levels.¹⁸⁹ In African countries there are medicinal and traditional uses for lion teeth, claws, whiskers, fat, bones, bile, testicles, heart, meat and tails.¹⁹⁰ International trade consists of lion teeth, claws, skin, bones, skulls and as well as live lions.¹⁹¹ Recently, the captive-bred lion industry in South Africa has begun supplying a demand for lion meat.¹⁹² The breeding facilities are obtaining permits to legally export lion meat from South Africa.¹⁹³ According to the CITES trade database, in 2012 (the most recent data) there were 557 reported exports of African lions, their parts and derivatives, from African countries.¹⁹⁴ The quantity of each export differs. For example, of the 180 lion trophy exports for the year, just one of these contained 452 trophies exported from South Africa to the United States of America.¹⁹⁵

It is suggested by Keet that exports of lion trophies have declined slightly in most African countries, due to decreasing demand.¹⁹⁶ However, it is highly probable that this is rather due to declining wild populations,

¹⁸⁶ Place et al 2011 *IFAW* 38.

¹⁸⁷ Ibid.

¹⁸⁸ Lindsey P, Roulet P & Romanach S "Economic and conservation significance of the trophy hunting industry in sub-Saharan Africa" 2007 (134) *Biological Conservation* 465.

¹⁸⁹ CITES 2012 *Trade Database: Comparative Tabulation Report* [http://trade.cites.org/en/cites_trade/download/view_results?filters%5Btime_range_start%5D=2012&filters%5Btime_range_end%5D=2013&filters%5Bexporters_ids%5D%5B%5D=all_exp&filters%5Bimporters_ids%5D%5B%5D=all_imp&filters%5Bsources_ids%5D=&filters%5Bpurposes_ids%5D%5B%5D=all_pur&filters%5Bterms_ids%5D%5B%5D=all_ter&filters%5Bselection_taxon%5D=taxon&filters%5Btaxon_concepts_ids%5D%5B%5D=6353&filters%5Breset%5D=&web_disabled=&filters\[report_type\]=comptab](http://trade.cites.org/en/cites_trade/download/view_results?filters%5Btime_range_start%5D=2012&filters%5Btime_range_end%5D=2013&filters%5Bexporters_ids%5D%5B%5D=all_exp&filters%5Bimporters_ids%5D%5B%5D=all_imp&filters%5Bsources_ids%5D=&filters%5Bpurposes_ids%5D%5B%5D=all_pur&filters%5Bterms_ids%5D%5B%5D=all_ter&filters%5Bselection_taxon%5D=taxon&filters%5Btaxon_concepts_ids%5D%5B%5D=6353&filters%5Breset%5D=&web_disabled=&filters[report_type]=comptab) (accessed 07.09.2014).

¹⁹⁰ Kasiki & Hamunyela 2014 *Animals Committee* 8.

¹⁹¹ CITES 2012 *Database*.

¹⁹² Hargreaves 2010 (3) *JWCLAS* 22.

¹⁹³ Ibid.

¹⁹⁴ CITES 2012 *Database*.

¹⁹⁵ Ibid.

¹⁹⁶ Keet D "A reappraised of the Draft on Management of Large Predators; Department of Environmental Affairs & Tourism" 2005 *North West Lion Breeders & Hunting Association* 14.

because exports of captive-bred lions have increased.¹⁹⁷ Inconsistencies in wild lion export data from other African states suggest that captive-bred lions are being exported from South Africa to other African states.¹⁹⁸ These lions are then hunted as 'wild' lions and re-exported as trophies.¹⁹⁹ The use of these captive-bred lions creates the impression that wild lion populations are thriving.²⁰⁰ Quotas for trophy hunting continue, while these populations are in fact declining.²⁰¹ These false population statistics could delay important conservation measures that may have otherwise saved wild populations from regional extinctions.²⁰²

Another threat to lion populations is the increasing trade in lion bones. The bones are used as a substitute for tiger bones in a Chinese brew known as 'tiger bone wine', believed to have healing and medicinal properties.²⁰³ In 2008 there were 70 international exports of lion bone, but in 2010 this number increased to 638 exports.²⁰⁴ Captive-bred lions are one source of these bones.²⁰⁵ South African captive lion breeders are exporting bones from their lions to the Chinese, either directly or through intermediaries.²⁰⁶ In 2008 South Africa exported 60 units of lion bones to Viet Nam.²⁰⁷ The substance of a unit is unclear and could be whole carcasses or single bones.²⁰⁸

It seems the East has a particular interest in the African lion.²⁰⁹ In 2012, 53 live captive-bred lions were exported to China for breeding and commercial reasons, and 12 were sold to Zoos.²¹⁰ In the same year, 39 captive-bred lions, and 4 wild lions were exported to Thailand zoos from South Africa.²¹¹ The popularity of tiger bone wine, is putting pressure on the

¹⁹⁷ Hargreaves 2010 (3) JWCLAS 19; Lindsey et al 2012 (42) SAJWR 13.

¹⁹⁸ Hargreaves 2010 (3) JWCLAS 18.

¹⁹⁹ Ibid.

²⁰⁰ Ibid at 20

²⁰¹ Ibid.

²⁰² Ibid.

²⁰³ Parker F "SA breeders embrace growing Asian demand for lion bones" 2012 *Mail & Guardian* <http://mg.co.za/article/2012-07-04-sa-breeders-embrace-growing-asian-demand-for-lion-bones> (accessed 12.11.2014).

²⁰⁴ Kasiki & Hamunyela 2014 *Animals Committee* 18.

²⁰⁵ Hargreaves 2010 (3) JWCLAS 20.

²⁰⁶ Ibid.

²⁰⁷ Ibid.

²⁰⁸ Ibid.

²⁰⁹ Ibid.

²¹⁰ CITES 2012 *Database*.

²¹¹ Ibid.

lion bone substitute.²¹² In 2012 one export unit from South Africa to Viet Nam contained 789kg of wild lion bones.²¹³ There is a clear possibility that the international trade in lion parts and derivatives for Traditional Chinese and African Medicine may grow uncontrollably.²¹⁴ This could impact lion populations as we have seen in cases of other big cats such as the tiger.²¹⁵ The use of African lion bones as a substitute for tiger bones endangers wild lion populations with increasing demand, and should not be permitted.²¹⁶ This legal trade needs to be well regulated and sustainable to ensure wild populations are not being overexploited with the increase in demand.²¹⁷

2.4.2 Illegal trade activities

Live lions, their parts and derivatives are also traded illegally.²¹⁸ This trade is at both international and domestic levels.²¹⁹ In West and Central Africa the illegal trade in lion skin is seen as a major cause of population decline.²²⁰ Lion meat is also traded illegally in Africa, especially in Mali, where meat from lions living in protected areas is sold in local villages.²²¹ In Kenya the illegal market for lion claws and teeth is also increasing, the country has a large Chinese population and it is speculated that this may increase demand for the export of lion parts to Asia.²²² The unlawful nature of illegal activities often makes it difficult to quantify the extent of such activities.²²³ Thus, numbers of lions and derivatives illegally exported are relatively unknown as the channels and mechanisms in place for this activity are under researched.²²⁴ With such insufficient data, the threat to wild populations is unknown.²²⁵

²¹² Lindsey et al 2012 (42) *SAJWR* 20.

²¹³ CITES 2012 *Database*.

²¹⁴ Kasiki & Hamunyela 2014 *Animals Committee* 14

²¹⁵ *Ibid*.

²¹⁶ Nowell K & Xu L "Taming the tiger trade: Chinas Markets for wild and captive tiger products since 1993 domestic trade ban" 2007 *TRAFFIC Wildlife Trade Monitoring Network* 35.

²¹⁷ Nowell & Bauer 2006 *SSC* 33.

²¹⁸ Kasiki & Hamunyela 2014 *Animals Committee* 12.

²¹⁹ *Ibid*.

²²⁰ *Ibid*.

²²¹ *Ibid* at 13.

²²² *Ibid*.

²²³ Bauer et al 2006 *SSC* 25.

²²⁴ *Ibid*.

²²⁵ Nowell & Bauer 2006 *SSC* 26.

The illegal trade in lion bones for traditional medicine and religious purposes exists, but is also hardly understood.²²⁶ There are no regulations to control this trade, and often the legal trade in lion trophies is used as a guise for selling other lion products on the black market.²²⁷ Weak law enforcement capacity and motivation in many African states, as well as insufficient knowledge and awareness, further allows this illegal trade to continue putting remaining lion populations at risk.²²⁸ This threat to lion populations is evident with the poaching of wild lion cubs.²²⁹ These wild cubs are raised in captivity and when mature, are killed for their bones to supply the lion bone Market.²³⁰ Often the female lions of these cubs are killed in the process of capture.²³¹

As stated above the captive-bred lion industry in South Africa is fuelling the demand for lion bone elsewhere in Africa.²³² Due to fixed, and relatively expensive prices of the captive-bred lions, the poaching of wild lions may increase, as it is often a cheaper activity, where prices can fluctuate.²³³ This is already a reality in China.²³⁴ Chinese tiger farms have fuelled demand for tiger bone, but syndicates continue to hunt the last remaining wild tigers in India.²³⁵ A further stimulant for poaching lions may result from the market preference in China for wild animal parts rather than captive-bred counterparts.²³⁶ In 2009 the illegal remains of 13 lions were found in a Vietnamese national's house, along with rhino carcasses.²³⁷ It was believed that he was working for a global syndicate in East Asia.²³⁸

Recently, the illegal trade in lion cubs has also increased.²³⁹ It is a particular problem in South Sudan and Somalia.²⁴⁰ In Somalia, female lions

²²⁶ Bauer et al 2006 SSC 25.

²²⁷ Kasiki & Hamunyela 2014 *Animals Committee* 12.

²²⁸ Nowell & Bauer 2006 SSC 25.

²²⁹ Macleod F "Officials turn a blind eye to the smuggling of wild lions" 2012 *Mail & Guardian* <http://mg.co.za/article/2012-07-12-officials-turn-a-blind-eye-to-the-smuggling-of-wild-lions> (accessed 26.11.2014).

²³⁰ Ibid.

²³¹ Ibid.

²³² Hargreaves 2010 (3) JWCLAS 21.

²³³ Ibid.

²³⁴ Ibid.

²³⁵ Ibid.

²³⁶ Lindsey et al 2012 (42) SAJWR 21.

²³⁷ Kasiki & Hamunyela 2014 *Animals Committee* 12.

²³⁸ Ibid.

²³⁹ Ibid at 6.

²⁴⁰ Ibid.

are killed and their cubs are sold at markets.²⁴¹ In 2006 a lion cub smuggling cartel was discovered on the Kenya-Somalia border where lion cubs were smuggled into Somalia and sold for between US \$150 to US \$300.²⁴²

These threats are the main reasons why the African lion is in a current state of decline. The threats can be divided into two categories. Threats arising from human-lion competition and conflict, such as habitat loss, prey scarcity, retaliatory and traditional killing. And threats arising due to commercial means, such as trade, and recreational trophy hunting. Any increase in these threats will have a negative impact on remaining lion populations.²⁴³ It is evident that there needs to be some kind of regulatory framework to try and combat, or overcome, these threats. The next chapter looks at the international environmental legal regime that pertains to each of these threats.

²⁴¹ Ibid at 8.

²⁴² Ibid.

²⁴³ Hazzah et al 2009 (142) *BioCon* 2428.

CHAPTER 3: THE INTERNATIONAL LEGAL REGIME

3.1 Overview of applicable international and regional instruments

Threats to the African lion are addressed both directly and indirectly in several international Conventions.²⁴⁴ Due to the transboundary nature of the species, some regional instruments are important as well. The relevant international and regional instruments are outlined briefly below. This is followed by a discussion of how each threat is addressed in the applicable instruments.

3.1.1 International instruments

3.1.1.1 *The Convention on Biological Diversity (CBD)*²⁴⁵

The CBD includes provisions aimed at the conservation and management of biodiversity, and the sustainable use of its components.²⁴⁶ The CBD affirms that conservation of biodiversity is a ‘common concern of humankind’ and that states have sovereign rights over their own biological resources.²⁴⁷ States are responsible for the conservation and use of such resources.²⁴⁸

3.1.1.2 *The Convention on the Conservation of Migratory Species of Wild Animals (CMS)*²⁴⁹

The CMS is concerned with the protection and conservation of migratory species.²⁵⁰ The Conventions aims for protection throughout the entire range of the species.²⁵¹ It restricts the taking of listed endangered species and encourages the creation of Agreements for specific species.²⁵²

²⁴⁴ Place et al 2011 *IFAW* 45.

²⁴⁵ Convention on Biological Diversity 31 ILM 818 (1992) (CBD).

²⁴⁶ Place et al 2011 *IFAW* 45.

²⁴⁷ Sands & Peel *Principles* 454

²⁴⁸ *Ibid.*

²⁴⁹ Convention on the Conservation of Migratory Species of Wild Animals 19 ILM 15 (1980) (CMS).

²⁵⁰ *Ibid.*

²⁵¹ *Ibid.*; Matz N “Chaos or Coherence? -Implementing and Enforcing the Conservation of Migratory Species through Various Legal Instruments” 2005 (65) *Heidelberg Journal of International Law* 201.

²⁵² *Ibid.*

3.1.1.3 The Convention Concerning the Protection of the World Cultural and Natural Heritage (WHC)²⁵³

The WHC establishes a system of protection for cultural and natural heritage sites of outstanding universal value.²⁵⁴ Each party must identify and delineate heritage sites in their territory. They then have the duty to protect and conserve these sights for future generations.²⁵⁵ By conserving a particular site the habitat of species located in that area, or that pass through that area, will be equally conserved.²⁵⁶ However, this link must be seen as coincidental as species survival is not the focus of the WHC.²⁵⁷

3.1.1.4 The Convention on Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR)²⁵⁸

RAMSAR aims to conserve and enhance wetlands.²⁵⁹ The initial focus of RAMSAR was on designating areas of importance for migratory water birds, and to promote wise use of these wetlands.²⁶⁰ There are nine criteria for identifying sites.²⁶¹ These include criteria based on species and ecological communities as well as non-avian animal species.²⁶² One of the most widely valued functions of a wetland is providing habitat for wildlife.²⁶³ States need to have at least one wetland of international importance to be party to the Convention.²⁶⁴

3.1.1.5 The UN Convention to Combat Desertification (UNCCD)²⁶⁵

The UNCCD addresses the issues of drought, desertification and conservation of natural resources.²⁶⁶ The UNCCD sets the basis for regional

²⁵³ WHC.

²⁵⁴ Ibid.

²⁵⁵ Sands & Peel *Principles* 510.

²⁵⁶ Matz 2005 (65) *HJIL* 200.

²⁵⁷ Ibid.

²⁵⁸ Convention on Wetlands of International Importance especially as Waterfowl Habitat 11 ILM 963 (1972) (RAMSAR).

²⁵⁹ Ibid; Sands & Peel *Principles* 492.

²⁶⁰ Gardener R & Davidson N "The Ramsar Convention" in LePage BA (ed) *Wetlands: Integrating Multidisciplinary Concepts* (2011) Springer New York 199-200.

²⁶¹ Ibid at 192.

²⁶² Ibid.

²⁶³ Nyman J "Ecological Functions of Wetlands" in LePage BA (ed) *Wetlands: Integrating Multidisciplinary Concepts* (2011) Springer New York 124.

²⁶⁴ RAMSAR Art 2(4).

²⁶⁵ United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa 33 ILM 1328 (1994) (UNCCD).

implementation plans, which mostly focus on the implementation of the Convention.²⁶⁷ These plans contain national action plans specifically for each state, and should include measures to conserve natural resources including vegetation cover, wildlife and biodiversity.²⁶⁸

3.1.1.6 The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam)²⁶⁹

The Rotterdam Convention is aimed at assisting developing nations to make informed decisions regarding the import of hazardous pesticides.²⁷⁰ When harmful chemicals, banned in other states, are imported by another state it is required that details on the effect of the chemical are provided to the importing state.²⁷¹ The Convention also makes provision for information exchange and technological assistance between Parties, especially facilitating developing countries.²⁷²

3.1.1.7 The Convention on International Trade in Endangered Species (CITES)²⁷³

CITES stresses the value of wild fauna and flora and promotes their protection against overexploitation from international trade.²⁷⁴ CITES works through the listing of flora and fauna on three Appendices.²⁷⁵ There are different levels of protection given to species on each Appendix.²⁷⁶ Appendix I contains species that are threatened with extinction and trade in these species is usually prohibited.²⁷⁷ Appendix II regulates trade in certain species that are not necessarily threatened with extinction but may become so,

²⁶⁶ Ibid.

²⁶⁷ Ibid Annex I Art 2.

²⁶⁸ Ibid Annex I Art 8 para3(b)(i).

²⁶⁹ Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade 38 ILM 1 (1999) (Rotterdam).

²⁷⁰ Ibid; The Rotterdam Convention Is relevant to the protection and conservation of lions due to the harmful chemicals used in poisoning of animals. See Place et al 2011 *IFAW* 47.

²⁷¹ Ibid.

²⁷² Sands & Peel *Principles* 532.

²⁷³ CITES.

²⁷⁴ Sands & Peel *Principles* 473.

²⁷⁵ Ibid at 472.

²⁷⁶ Ibid.

²⁷⁷ Ibid at 474; CITES Art II(2).

unless trade is controlled and regulated.²⁷⁸ Appendix III allows states to list species of trade concern under their jurisdiction.²⁷⁹ The African lion is listed on Appendix II.²⁸⁰

3.1.2 Regional instruments

3.1.2.1 *The African Convention on the Conservation of Nature and Natural Resources (African Convention)*²⁸¹

The African Convention is concerned with species protection within Africa.²⁸² The African lion is listed as a Class B species under this Convention, a Class B species shall be:

“totally protected, but may be hunted, killed, captured or collected under special authorization granted by the competent authority”²⁸³

The African Convention is the only regional Convention that specifically lists the African lion.²⁸⁴

3.1.2.2 *The Southern African Development Community Protocol on Wildlife Conservation and Law Enforcement (SADCP)*

Eleven African lion range states have signed the SADCP.²⁸⁵ However, the African lion is not listed specifically in this Protocol.²⁸⁶ The SADCP objectives can be summarised as promoting sustainable use of wildlife, enforcing wildlife laws, and assisting in building capacity for wildlife management, conservation and enforcement.²⁸⁷ Under SADCP states have the obligation to take measures to prevent the extinction of species.²⁸⁸ If states fail to fulfil

²⁷⁸ Place et al 2011 *IFAW* 21; CITES Art II(2)(a).

²⁷⁹ CITES Art II(3).

²⁸⁰ Ibid Appendix II.

²⁸¹ The African Convention on the Conservation of Nature and Natural Resources 101 UNTS 3 (1968) (African Convention).

²⁸² Ibid. In 2003 the Revised African Nature Convention was established to rectify some issues of the current African Convention. However, the Revised Convention does not have enough ratifications and so it is not yet in force. See African Convention on the Conservation of Nature and Natural Resources (Revised Version) (Maputo) (2003); Sands & Peel *Principles* 481.

²⁸³ African Convention Art VIII(1)(b).

²⁸⁴ Place et al 2011 *IFAW* 47.

²⁸⁵ Ibid at 45.

²⁸⁶ Southern African Development Community Protocol on Wildlife Conservation and Law Enforcement (2003) (SADCP).

²⁸⁷ Ibid Art 4; Place et al 2011 *IFAW* 48.

²⁸⁸ SADCP Art 7(3)(b).

the obligations, or undermine the objectives, of the SADC they could be sanctioned.²⁸⁹ This is a powerful provision, to promote compliance and enforcement.²⁹⁰ However, even with states failing to fulfil obligations in reality, no such sanctions have been approved.²⁹¹

3.1.2.3 The Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (Lusaka Agreement)²⁹²

The Lusaka Agreement has the objective of reducing and eliminating illegal trade in wild fauna and flora within territories of states party to the Agreement.²⁹³ It is aimed at facilitating cooperation among African states in investigations on violations of national laws pertaining to illegal trade in wildlife.²⁹⁴ The Agreement provides for the establishment of a Task Force for Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (Task Force).²⁹⁵ The Task Force has a variety of functions around co-operative activities, investigation of illegal trade and violations of national law.²⁹⁶

3.2 Legal regime applicable to threats from habitat loss and prey scarcity

3.2.1 Instruments applicable to habitat protection

Habitat loss has an impact on the survival of African lions, and also decreases the number of prey available to the lions.²⁹⁷ Land use change due to development, agriculture, population growth and desertification are the main drivers of habitat loss and degradation.²⁹⁸ This has a negative impact on African lions as they are forced to expand their home range, live in inhabitable landscapes and compete with humans for space and

²⁸⁹ The appropriate sanction is decided on a case-by-case basis and is determined by the Summit of the SADC. See *Ibid* Art 12.

²⁹⁰ Place et al 2011 *IFAW* 49

²⁹¹ *Ibid*.

²⁹² Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora 1950 UNTS 35 (1994) (Lusaka Agreement).

²⁹³ Sands & Peel *Principles* 483.

²⁹⁴ Lusaka Agreement 2014 *Task Force* <http://www.lusakaagreement.org> (accessed 16.11.2014).

²⁹⁵ Sands & Peel *Principles* 483.

²⁹⁶ The Task Force was launched in 1999 and commenced operations thereafter. See *Ibid*.

²⁹⁷ See Chapter 2 section 1; Place et al 2011 *IFAW* 18.

²⁹⁸ See Chapter 2 section 2.

resources.²⁹⁹ These impacts are resulting in increasing lion mortality and decreasing pride and population sizes.³⁰⁰

The conservation and management of African lions and lion habitat are central objectives of the IUCN African lion conservation strategies, which were formulated in 2006.³⁰¹ Within the strategies' domain of policy and land-use, is another important objective. This objective is to develop and implement harmonious and comprehensive legal and institutional frameworks that provide for wildlife-integrated land-use and lion conservation.³⁰² The integration of wildlife, cattle and agriculture regulation is to be promoted in range states through governance bodies to ensure conservation in land use planning processes.³⁰³ Range states are to promote the sustainable use of natural resources around protected areas, and to create new areas for conservation, and corridors for lion population connectivity.³⁰⁴ The legality of these measures is provided for in some of the international and regional conventions mentioned above.

The CBD is relevant to this threat of habitat loss as it provides indirect protection through the establishment of protected areas.³⁰⁵ Protected areas are regarded as important tools for maintaining lion habitat integrity and restoration.³⁰⁶ All African lion range states are party to the CBD and should establish a system of protected areas and produce guidelines to manage these areas.³⁰⁷

²⁹⁹ Ibid.

³⁰⁰ Bauer et al 2014 *IUCN*.

³⁰¹ Bauer et al 2006 SSC 7; Nowell & Bauer 2006 SSC 8.

³⁰² Mechanisms to reach these objectives include monitoring and survey programmes; capacity building; national action plans; establishment of wildlife-integrated land-use plans; regional legal frameworks integrating lion conservation; management of 50 per cent of protected and wildlife areas within lion ranges and encouragement of the adoption of global instruments relevant to lion conservation by range states. See Nowell & Bauer 2006 SSC 38-41.

³⁰³ Bauer et al 2006 SSC 20.

³⁰⁴ Ibid at 21.

³⁰⁵ CBD Art 8(a)&(b).

³⁰⁶ Matz 2005 (65) *HJIL* 202; Geldmann J, Barnes M, Coad L, Craigie I, Hockings M & Burgess N "Effectiveness of terrestrial protected areas in reducing habitat loss and population decline" 2013 (161) *Biological Conservation* 230.

³⁰⁷ CBD 2014 *List of Parties* <http://www.cbd.int/information/parties.shtml> (accessed 06.10.2014); CBD Art 8(a)&(b).

Protected areas have been found to reduce the rate of habitat decline but do not prevent it.³⁰⁸ With increased threats bordering these areas, habitat loss continues.³⁰⁹ Even so, in 2010 the CBD CoP revised and updated its 'Strategic Plan for Biodiversity' for the period 2011 to 2020, adopting new targets for conservation of biodiversity.³¹⁰ Target 11 calls for 17 per cent of the global terrestrial land surface to be protected and managed by 2020.³¹¹

Through the CBD, and in line with promoted IUCN objectives, states are also directed to manage biological resources that are important for conservation of biological diversity outside of protected areas.³¹² This is essential as lion populations are being restricted to protected areas, due to land use change of the surrounding area.³¹³ To assist states in conservation and sustainable development the CBD Technical Series No.44 is provided.³¹⁴ It is a guide to help states integrate protected areas into wider landscapes, plans and strategies.³¹⁵ With particular reference to lion range states, which contain dry and sub-humid land, the Technical Series No.71 is also important.³¹⁶ It provides detail on how best to protect the biodiversity of such land as well as effective management of protected areas and the land adjacent to them.³¹⁷

The CMS attempts to fill the gaps of this broader framework by providing a species-specific approach to conservation and protection of habitat.³¹⁸ The African lion is not yet listed under the CMS as a species of concern. However, due to their rate of decline, there has been a Proposal by

³⁰⁸ Geldmann et al 2013 (161) *BioCon* 235.

³⁰⁹ Ibid.

³¹⁰ These targets were named the Aichi Biodiversity Targets, and consists of 20 targets organised under different strategic goals. They are a move towards a more ecosystem-based approach to regulation and management as well as promote conservation and sustainable use of resources. See Sands & Peel *Principles* 443 & 462.

³¹¹ Geldmann et al 2013 (161) *BioCon* 236.

³¹² CBD Art 8(c).

³¹³ Bauer et al 2006 *SSC* 6.

³¹⁴ Ervin J, Mulongoy K, Lawrence K, Game E, Sheppard D, Bridgewater P, Bennet G, Gidda S & Bos P "Making Protected Areas Relevant: A guide to integrating protected areas into wider landscapes, seascapes and sectoral plans and strategies" 2010 *CBD Technical Series No.44*.

³¹⁵ Ibid.

³¹⁶ Secretariat of the CBD, Global Mechanism of the UNCCD and OSLO Consortium "Valuing the biodiversity of dry and sub-humid lands" 2013 *Technical Series No.71*.

³¹⁷ Ibid.

³¹⁸ Matz 2005 (65) *HJIL* 205.

the Kenyan Government to list the African lion on Appendix II of the CMS.³¹⁹ At the recent CoP11 in November 2014 the Proposal was set aside and a Resolution was adopted instead.³²⁰ The Resolution requests range states to consult with one another over the population status of the African lion.³²¹ The Resolution also recommends that range states develop regional conservation action plans designed to reverse lion population declines.³²² Range states are then requested to present a review of progress at the 44th and 45th meetings of the Standing Committee in 2015.³²³ There is the possibility of re-submission of the Proposal to include the lion in CMS Appendix II at CoP12 in 2017.³²⁴

In the interim, the fundamental principles of the CMS still apply to range states that are all party to the Convention.³²⁵ These principles include acknowledgement of the importance of migratory species, paying special attention to their conservation status.³²⁶ Range states must also take action to avoid any migratory species becoming endangered.³²⁷ Most importantly, in terms of habitat protection, range states are required to take individual or cooperative steps to conserve the species as well as their habitat.³²⁸ It is important that these principles become a priority of range states, as there are no Agreements under the CMS that fall over the habitat of the African lion.³²⁹ The Agreements currently in place in Africa are for Gorillas in Central Africa

³¹⁹ CMS Proposal "Proposal for the inclusion of the lion (*Panthera leo*) in CMS Appendix II" 2014 *UNEP/CMS/COP11/Doc.24.1.2/Rev.1: Proposal II/2*.

³²⁰ Lenarz V "Global Protection Proposed for Sharks, Rays, Polar Bear and Lions" 2014 *CMS Press Release* <http://www.cms.int/en/news/global-protection-proposed-sharks-rays-sawfish-polar-bear-and-lions> (accessed 06.10.2014); CMS Draft Resolution "Conservation and Management of the African Lion, *Panthera leo*" 2014 *UNEP/CMS/COP11/CRP4*.

³²¹ CMS Draft Resolution 2014.

³²² *Ibid.*

³²³ *Ibid.* The Standing Committee is responsible for carrying out interim activities on behalf of the CoP. See CMS 2014 *Standing Committee* <http://www.cms.int/en/meetings/standing-committee> (accessed 26.11.2014).

³²⁴ CMS Draft Resolution 2014.

³²⁵ CMS Art II.

³²⁶ *ibid* Art II(1).

³²⁷ *Ibid* Art II(2).

³²⁸ *Ibid* Art II(1).

³²⁹ CMS 2014 *Agreements* <http://www.cms.int/en/cms-instruments/agreements> (accessed 06.10.2014).

and Elephants in West Africa.³³⁰ Both species have different range and habitat requirements to that of the African lion.³³¹

The WHC provides indirect conservation of some of the habitat across the range of the African lion. Some African lion populations live in, and pass through, areas that are deemed to be World Heritage Sites (WHS) formed under the WHC.³³² There are 40 World Heritage Natural Sites that coincide with the range of the African lion.³³³ The responsibility to protect and conserve these sites rests on the state where the site is located.³³⁴ It is the discretion of the state as to what measures are put in place to protect the elements of the site.³³⁵ As a tool for lion habitat protection and conservation the WHC thus falls short of having any tangible impact if range states do not take the initiative to protect their WHS.³³⁶

The Serengeti National Park is a WHS.³³⁷ It covers 1.5 million hectares of the savannah biome, and is home to African lions and various ungulate species.³³⁸ The Serengeti National Park has recently received international attention from a judgment by the East African Court of Justice.³³⁹ This judgment was on the proposal by the Tanzanian Government to upgrade a 179km gravel road through the Park to tar.³⁴⁰ The outcome of this case would impact the World Heritage Status, the environment and the species of the Park.³⁴¹ The applicant³⁴² argued that to do so would be in contravention of Tanzania's obligations under numerous Conventions, including the WHC,

³³⁰ Ibid.

³³¹ Ibid.

³³² WHC.

³³³ WHC 2014 *World Heritage List* <http://whc.unesco.org/en/list/> (accessed 06.10.2014).

³³⁴ WHC art 4.

³³⁵ Ibid.

³³⁶ Riggio et al 2013 (22) *BioCon* 30.

³³⁷ WHC 2014 *Serengeti National Park* <http://whc.unesco.org/en/list/156/> (accessed 06.10.2014).

³³⁸ Ibid.

³³⁹ *African Network for Animal Welfare (ANAW) v The Attorney General of the United Republic of Tanzania* (9 of 2010) 2014 EACJ Judgment 5.

³⁴⁰ Ibid.

³⁴¹ Ibid at 6.

³⁴² ANAW, a Pan-African animal welfare and community-centred organisation registered as an NGO in Kenya. See *ibid* at 2.

the CBD, the African Convention, and the Treaty for the Establishment of the East African Community (TEAC).³⁴³

The Court stated that it would not rule on the obligations of the Tanzanian Government under other international Conventions as the applicant was not clear on which parts of the Conventions the defendant violated.³⁴⁴ However, the Court did find the Tanzanian Government to be in contravention of provisions of the TEAC, particularly those that deal with obligations to protect and conserve the environment.³⁴⁵ The Court concluded, that the road should not be upgraded, as it would have an irreversible impact on the environment, the ecosystem and status of the WHS.³⁴⁶ Under the TEAC Tanzania is bound by this decision. However, no ruling was made on the use of the existing road, and it is believed that traffic and public use will increase regardless of the nature of the road.³⁴⁷

Another Convention that may provide indirect conservation of African lion habitat is RAMSAR.³⁴⁸ One of the most widely valued functions of a wetland is providing a habitat for wildlife.³⁴⁹ Often large mammals of Africa, such as lions and their prey, are reliant on wetlands as valuable water sources.³⁵⁰ Across Africa many of the listed wetlands support, and provide habitat for African lions.³⁵¹ Burkina Faso and Zambia both have three listed wetlands, and Namibia, Benin, Cameroon, Congo, and Tanzania each have one listed wetland that support African lions.³⁵²

³⁴³ Ibid at 5; Treaty Establishing the East African Community 2144 UNTS 255 (1999) (TEAC).

³⁴⁴ *African Network for Animal Welfare (ANAW) v The Attorney General of the United Republic of Tanzania* (9 of 2010) 2014 EACJ Judgment 29.

³⁴⁵ Ibid; TEAC Art 5(3)(c), Art 8(1)(c), Art 111(1) & Art 114(1).

³⁴⁶ *African Network for Animal Welfare (ANAW) v The Attorney General of the United Republic of Tanzania* (9 of 2010) 2014 EACJ Judgment 30.

³⁴⁷ ACF "East African Court Decision Blocks Paved Road Across Serengeti" 2014 *African Conservation Foundation in Focus* <http://www.africanconservation.org/in-focus/serengeti/item/east-african-court-decision-blocks-paved-road-across-serengeti> (accessed 06.10.2014).

³⁴⁸ RAMSAR.

³⁴⁹ Nyman J "Ecological Functions of Wetlands" in *Wetlands* 124.

³⁵⁰ Kabii T "An overview of African wetlands" in Hails A (ed) *Wetlands, biodiversity, and the Ramsar Convention* (1997) Ramsar Convention Bureau Gland, Switzerland.

³⁵¹ Ramsar Convention 2014 *Contracting Parties* http://www.ramsar.org/cda/en/ramsar-about-parties-parties/main/ramsar/1-36-123^23808_4000_0__ (accessed 06.10.2014).

³⁵² Ibid.

Conversely, non-human causes that have attributed to African lion habitat loss are mainly drought and desertification.³⁵³ The UNCCD could play a role in addressing this problem.³⁵⁴ However, this Convention is anthropocentric in nature and focuses on combating desertification and drought for human needs and sustainable development.³⁵⁵ Nevertheless, the management of African soil, land and biodiversity, could still have an offsetting effect in conserving the sensitive savannah habitat that is important to the African lion.³⁵⁶

Education is a necessity to help growing communities understand their impact on the surrounding habitat and wildlife.³⁵⁷ The CBD encourages states to promote understanding and the importance of conserving biodiversity by including these in educational programmes.³⁵⁸ The WHC encourages states to endeavour to strengthen their people's appreciation and respect of cultural and natural heritage, through educational programmes.³⁵⁹ Under this Convention states are also required to keep the public informed of any dangers threatening the WHS in their territory.³⁶⁰ Education and public awareness are also promoted through the UNCCD to encourage individuals to undertake activities in a sustainable way to decrease the effects of desertification and habitat degradation.³⁶¹

From a regional perspective there is slightly more targeted conservation of African lions and their habitat, especially with regards to the African Convention. The African Convention calls on states to recognise that certain species, such as the African lion, need special protection.³⁶² This protection includes protection of habitat necessary for the species survival.³⁶³ In reaching some of the IUCN objectives in this regard, the states party to the

³⁵³ Bauer et al 2006 SSC 18.

³⁵⁴ UNCCD.

³⁵⁵ UNCCD 2012 *About the Convention* 2012 <http://www.unccd.int/en/about-the-convention/Pages/About-the-Convention.aspx> (accessed 07.10.2014).

³⁵⁶ Bauer et al 2006 SSC 19.

³⁵⁷ Ibid.

³⁵⁸ CBD Art 13(a).

³⁵⁹ WHC Art 27(1).

³⁶⁰ Ibid Art 27(2).

³⁶¹ UNCCD Art 19.

³⁶² African Convention Art VIII(1).

³⁶³ Ibid.

African Convention are required to establish conservation areas.³⁶⁴ These areas are to ensure conservation of all species and more particularly those species listed in the Annex, such as the African lion, of the Convention.³⁶⁵

The SADC has a broader approach, where states have a general obligation to protect wildlife and wildlife habitats to ensure the maintenance of viable wildlife populations.³⁶⁶ However, it adds to the educational provisions of the international Conventions. States party to the SADC are required to develop programmes and mechanisms to educate the public and raise awareness over issues concerning the conservation of wildlife.³⁶⁷

3.2.2 Instruments applicable to lion prey scarcity

All the above instruments for habitat protection are also applicable to ungulate species protection. If the habitat of the lion is protected, then it follows that the habitat of its prey shall be protected too.³⁶⁸ However, ungulate species scarcity is not only due to habitat loss. There are other issues depleting the African lion prey base such as disease due to proximity to livestock, an increase in game hunting, and the bushmeat trade.³⁶⁹

The effective conservation and management of lions' prey is an objective of the IUCN strategies.³⁷⁰ The same mechanisms as listed above for habitat conservation are proposed.³⁷¹ Additionally, specific measures for the management of hunting ungulates are promoted to improve monitoring of prey populations.³⁷² The inclusion of communities in the development of wildlife management regulations is also promoted, with an objective to reduce illegal bushmeat hunting and trade.³⁷³

The threat to ungulate species from bushmeat trade and industry was first recognised by CITES in 2000 with the creation of the CITES Bushmeat

³⁶⁴ Ibid Art X(1)(b).

³⁶⁵ Ibid.

³⁶⁶ SADC Art 7(3).

³⁶⁷ Ibid Art 7(7).

³⁶⁸ Place et al 2011 *IFAW* 19.

³⁶⁹ See Chapter 2 section 1.2.

³⁷⁰ Bauer et al 2006 *SSC* 7; Nowell & Bauer 2006 *SSC* 8.

³⁷¹ See Chapter 3 section 2.1; Nowell & Bauer 2006 *SSC* 38.

³⁷² Bauer et al 2006 *SSC* 22.

³⁷³ Ibid.

Working Group at CoP11.³⁷⁴ Although most trade in bushmeat occurs at a domestic level, cross-border and international bushmeat trade is on the rise and is proven to be unsustainable.³⁷⁵ This Working Group was formed to promote awareness and action for sustainable management of the trade in bushmeat.³⁷⁶ By 2010 the trade in bushmeat had increased which brought about a Decision by CITES to collaborate with the CBD.³⁷⁷

The threat of prey scarcity to African lions has been acknowledged by the Secretariat of the CBD.³⁷⁸ Particularly in 2008 when the Secretariat issued a document that addressed the growing bushmeat crisis.³⁷⁹ The document is based on Article 2 of the CBD, which emphasises sustainable use of the components of biodiversity.³⁸⁰ It suggests that international policy should give greater attention to positive incentives in range states to reduce the bushmeat industry.³⁸¹ This is in place of the more traditional restrictive and repressive measures currently used.³⁸²

A bushmeat Liaison Group, formed under the CBD, established recommendations for addressing the bushmeat trade in 2011 in collaboration with the CITES Working Group.³⁸³ This Liaison Group consists of three Working Groups each with a different focus, which fall under the objectives of the IUCN strategies.³⁸⁴ Working Group A concentrates on sustainable use and livelihood improvements, Group B on legislation, enforcement and compliance, and Group C on capacity development and awareness.³⁸⁵ Some of the recommendations include strengthening national political will against bushmeat trade; strengthening existing international commitments around

³⁷⁴ CITES Secretariat "Joint Meeting of the CBD Liaison Group on Bushmeat and the CITES Central Africa Bushmeat Working Group" 2011 *CITES and Bushmeat* 9.

³⁷⁵ *Ibid* at 2.

³⁷⁶ *Ibid* at 9.

³⁷⁷ CITES Decision "Bushmeat" 2010 *Decision 14.74/Rev. CoP15*.

³⁷⁸ Nasi R, Brown D, Wilkie D, Bennett E, Tutin C, van Tol G, & Christophersen T "Conservation and use of wildlife-based resources: the bushmeat crisis" 2008 *Secretariat of the CBD and Center for International Forestry Research Bogor: Technical Series no.33* 1.

³⁷⁹ *Ibid* at 12.

³⁸⁰ CBD Art 2.

³⁸¹ Nasi et al 2008 *Technical Series* 40.

³⁸² *Ibid*.

³⁸³ Lindsey et al 2012 *WCS Report* 13.

³⁸⁴ Bauer et al 2006 *SSC* 7; Nowell & Bauer 2006 *SSC* 8.

³⁸⁵ CBD "Joint Meeting of the CBD Liaison Group on Bushmeat and the CITES Central Africa Bushmeat Working Group" 2011 *UNEP/CBD/LG-Bushmeat/2/4*.

conservation and sustainable use of shared wildlife resources; encouraging regional bushmeat working groups; and cooperation to reduce the international trade in bushmeat.³⁸⁶ In terms of sustainable use and management by local communities, the Liaison Group recommended that support of the international community is needed at local, national and transboundary levels.³⁸⁷ Such support is vital to increase enforcement and monitoring capacity, develop and implement protein and income alternatives for those reliant on bushmeat, and increase education and awareness of bushmeat hunting and trade.³⁸⁸

Following with sustainable use of wildlife and game, regional instruments bring this issue to a domestic level. The principles of the SADC include cooperation to develop approaches for the conservation and sustainable use of wildlife.³⁸⁹ Sustainable use is also highlighted as a main objective of the Protocol.³⁹⁰ A Wildlife Sector Technical Committee is set up by the Protocol, which is important for conservation.³⁹¹ It is comprised of Heads of wildlife departments to, amongst other functions, develop policy guidelines for a regional approach to conservation and sustainable use of wildlife.³⁹² Additionally, states party to the Protocol are encouraged to standardise measures pertaining to sustainable use and conservation.³⁹³ Firstly, measures around the protection of wildlife species and their habitat.³⁹⁴ Secondly, governance of illegal trade in wildlife, and thirdly economic and social incentives for the conservation and sustainable use of wildlife.³⁹⁵

The African Convention however, does not contain such provisions. The only relevance to ungulate conservation is through listing some of these species, such as the Buffalo, in Class B.³⁹⁶ This provides some protection to

³⁸⁶ Ibid at 18.

³⁸⁷ Ibid at 21.

³⁸⁸ Ibid.

³⁸⁹ SADC Art 3(2).

³⁹⁰ Ibid Art 4(1).

³⁹¹ Ibid Art 5(7).

³⁹² Ibid.

³⁹³ Ibid Art 6.

³⁹⁴ Ibid.

³⁹⁵ Ibid.

³⁹⁶ African Convention Art VIII(1).

the species. However, they may still be hunted with the relevant permit, and not all ungulate species are listed.³⁹⁷

3.3 Legal regime applicable to threats from retaliatory and traditional killing

Due to land use change and growing human populations, livestock is increasing in abundance and availability.³⁹⁸ This is often near to, and within, lions expanding home ranges, and therefore, easy prey for lions.³⁹⁹ Thus African lions pose a great threat to local livelihoods.⁴⁰⁰ There are problems of livestock predation, as well as human attacks.⁴⁰¹ Both these issues result in retaliatory killing of lions.⁴⁰² Added to this is the killing of lions for traditional reasons.⁴⁰³

The IUCN conservation strategies recognise the need for sustainable lion-human cohabitation.⁴⁰⁴ Recommendations are made for the equitable sharing of income derived from wildlife conservation to ensure local communities support conservation of lions.⁴⁰⁵ Three suggestions are made in order to reduce human-lion conflict. Firstly, enclosures of cattle should be improved, livestock monitoring systems should be established, and support groups should be formulated to educate communities and improve public awareness on the status of lion populations.⁴⁰⁶

3.3.1 Instruments applicable to retaliatory and traditional killing

Even though retaliatory killing occurs at a local level, the international framework does provide some guidance on how states should tackle these issues.⁴⁰⁷ This guidance is around the protection of wildlife, poison management, and the formulation of incentives to curb killings.⁴⁰⁸ The CBD,

³⁹⁷ Ibid.

³⁹⁸ Valeix et al 2012 (49) *JAE* 77.

³⁹⁹ Ibid.

⁴⁰⁰ Ibid at 73.

⁴⁰¹ Packer & Kissui 2007 *Transactions* 4.

⁴⁰² Ibid.

⁴⁰³ Fitzherbert et al 2014 (174) *BioCon* 84.

⁴⁰⁴ Bauer et al 2006 *SSC* 7.

⁴⁰⁵ Ibid.

⁴⁰⁶ Ibid at 23-24; Nowell & Bauer 2006 *SSC* 36.

⁴⁰⁷ Packer & Kissui 2007 *Transactions* 4.

⁴⁰⁸ Ibid.

for example, encourages development of national legislation that is necessary for the protection of threatened species.⁴⁰⁹

Protected areas, as mentioned in the previous section, are established under the CBD.⁴¹⁰ These areas could constitute as indirect mitigating measures to prevent human-lion conflict.⁴¹¹ Conserving wildlife within a designated area, also keeps the wildlife away from human contact.⁴¹² Some of these protected areas are fenced, which creates a physical barrier between the lions within the reserve and the communities outside.⁴¹³

The use of poison to kill lions is a growing threat and is harmful to ecosystems as a whole.⁴¹⁴ The Rotterdam Convention could address this issue as it is aimed at assisting developing nations regarding the import of hazardous substances.⁴¹⁵ However, the Conventions Prior Informed Consent list of chemicals does not contain many of the chemicals used by communities to poison lions.⁴¹⁶ Thus, the Convention is ineffective as a controlling regime in this regard.⁴¹⁷ Listing the African lion under the CMS could possibly provide for more protection against these chemicals.⁴¹⁸ The CMS encourages states to prevent, reduce and control the release of harmful substances into the habitat of listed species.⁴¹⁹

It is appropriate to delve into regional instruments for this threat as they may hold provisions that are more specific to local context. At a regional level the African Convention adds to the legislative requirement of the CBD, that

⁴⁰⁹ CBD Art 8(k).

⁴¹⁰ Ibid Art 8.

⁴¹¹ Bauer et al 2006 SSC 19.

⁴¹² Ibid.

⁴¹³ Creel S, Becker M, Durant S, M'Soka J, Matandiko W, Dickman A, Christianson D, Dröge E, Mweetwa T, Pettorelli N, Rosenblatt E, Schuette P, Woodroffe R, Bashir S, Beudels-Jamar R, Blake S, Borner M, Breitenmoser C, Broekhuis F, Cozzi G, Davenport T, Deutsch J, Dollar L, Dolrenry S, Douglas-Hamilton I, Fitzherbert E, Foley C, Hazzah L, Henschel P, Hilborn R, Hopcraft J, Ikanda D, Jacobson A, Joubert B, Joubert D, Kelly M, Lichtenfeld L, Mace G, Milanzi J, Mitchell N, Msuha M, Muir R, Nyahongo J, Pimm S, Purchase G, Schenck C, Sillero-Zubiri C, Sinclair A, Songorwa A, Stanley-Price M, Tehou C, Trout C, Wall J, Wittemyer G & Zimmermann A "Conserving large populations of lions-the argument for fences has holes" 2013 (16) *Ecology Letters* 3.

⁴¹⁴ Packer & Kissui 2007 *Transactions* 10.

⁴¹⁵ Place et al 2011 *IFAW* 47.

⁴¹⁶ Ibid.

⁴¹⁷ Ibid.

⁴¹⁸ CMS Art V(5)(i).

⁴¹⁹ Ibid.

states should adopt adequate legislation on hunting and the capture of fauna.⁴²⁰ This includes legislation prohibiting unauthorised methods of hunting and capture.⁴²¹ One such method is the use of drugs and poisons (pesticides).⁴²² In 83 per cent of African countries it is illegal to hunt wildlife using poisons under national law.⁴²³ However, regulations around pesticide use have been found to be inadequate due to the ‘over-the-counter’ availability of legally restricted pesticides.⁴²⁴

As promoted by the IUCN Strategies, incentive based measures are to be utilised to prevent and deter communities from killing for retaliatory and ceremonial reasons.⁴²⁵ Economic, or other incentives to curb lion killing, are to be established.⁴²⁶ The CBD does this by encouraging states to implement some economic and social incentives for the conservation and sustainable use of components of biological diversity.⁴²⁷ The SADC also requires states to promote economic and social incentives in wildlife management and conservation programmes.⁴²⁸ This is to encourage conservation and sustainable use of wildlife.⁴²⁹ The sharing of benefits, from African lion conservation and tourism, with communities will result in increased local support in protecting these animals.⁴³⁰

Additionally, education on the plight of the African lion is also important, as is emphasised by the IUCN strategies.⁴³¹ As seen, education around conservation of wildlife is addressed in the CBD, WHC and SADC.⁴³² To engage communities in conservation and protection of the African lion, at a local level, the Lion Guardians program was established in 2007 in

⁴²⁰ African Convention Art VII.

⁴²¹ Ibid Art VIII(2)(c)(2).

⁴²² The use of poison in poison weapons and poison bait is prohibited. See Ibid.

⁴²³ Ogada D “The power of poison: pesticide poisoning of Africa’s wildlife” 2014 (1332) *Annals of the New York Academy of Sciences* 1.

⁴²⁴ Ibid at 13.

⁴²⁵ Bauer et al 2006 SSC 23.

⁴²⁶ Ibid.

⁴²⁷ CBD Art 11.

⁴²⁸ SADC Art 7(6).

⁴²⁹ Ibid.

⁴³⁰ Bauer et al 2006 SSC 23.

⁴³¹ Ibid at 23-24; Nowell & Bauer 2006 SSC 36.

⁴³² See Chapter 3 section 2; CBD Art 13(a); SADC Art 7(7)(a); WHC Art 27.

collaboration with the Kenyan Wildlife Service.⁴³³ The program aims at reducing retaliatory and traditional killing of African lions and is acknowledged and supported by the international community.⁴³⁴ The program employs young Maasai warriors as Lion Guardians.⁴³⁵ Their duty is to protect lions in Amboseli in Kenya and Taragire and Ruaha in Tanzania.⁴³⁶ The Lion Guardians still play their traditional role of protecting the community from lions, but do so in a non-violent way.⁴³⁷ The program highlights the IUCN objectives by providing incentives for communities to conserve and protect lions.⁴³⁸ These incentives are through conservation related employment in training, monitoring and community assistance.⁴³⁹ Since inception of the program, no lions have been killed in areas where Lion Guardians are on duty, whereas in neighbouring areas the killing continues.⁴⁴⁰

3.4 Legal regime applicable to threats from the trophy hunting industry

Both wild and captive-bred lions are killed in trophy hunting.⁴⁴¹ The wild hunting industry lacks the structure and transparency to ensure sustainability of African lion populations, and could give rise to overexploitation.⁴⁴² The captive-bred industry also has devastating effects on the conservation of wild lions in terms of conservation efforts, genetic threats and illegal poaching of wild lions for breeding facilities.⁴⁴³ There is also the problem of inbreeding at these facilities, as animals are bred for hunting and not conservation.⁴⁴⁴

⁴³³ Kenyan Wildlife Service is a Kenyan Government Corporation with the mandate to manage and conserve the wildlife of Kenya. See Kenya Wildlife Service 2014 *Overview: About us* <http://www.kws.org/about/index.html> (accessed 09.02.2015); Lion Guardians 2014 *Our Tools* <http://lionguardians.org/our-tools> (accessed 07.10.2014).

⁴³⁴ Lion Guardians 2014 *Tools*.

⁴³⁵ Hazzah et al 2014 (28) *CB* 852.

⁴³⁶ *Ibid.*

⁴³⁷ *Ibid.*

⁴³⁸ *Ibid.*

⁴³⁹ *Ibid.*

⁴⁴⁰ Lion Guardians 2014 *Our Approach* <http://lionguardians.org/our-approach/tradition-based-conflict-mitigation> (accessed 07.10.2014).

⁴⁴¹ Hargreaves 2010 (3) *JWCLAS* 8.

⁴⁴² Whitman et al 2007 (21) *CB* 593.

⁴⁴³ See Chapter 2 section 3.2; Lindsey et al 2012 (42) *SAJWR* 12.

⁴⁴⁴ Panel of Experts 2005 *Report* 23.

The IUCN strategy for East and Southern Africa includes effective and sustainable trophy hunting measures as targets within its objective of effective conservation and management of lions.⁴⁴⁵ To do so it promotes the identification and implementation of best management standards and practices in all trophy hunting areas.⁴⁴⁶ The IUCN strategy for West and Central Africa proposes the set up of systems for lion population monitoring and the promotion of further research on lions.⁴⁴⁷

3.4.1 Instruments applicable to the hunting of wild lions

One of the main threats to African lions in the wild is the lack of regulation and transparency of the trophy hunting industry.⁴⁴⁸ The CBD declares that states are responsible for conserving their biodiversity, and that any use of biological resources must be done so in a sustainable manner.⁴⁴⁹ In using the African lion for commercial means, states should adhere to the sustainable use provisions of the CBD.⁴⁵⁰ However, due to the growing pressure on wild lion populations for this industry, there may not be any lions left for future generations to undertake the same activity, or even to observe the animals in their natural habitat.⁴⁵¹

In terms of transparency, under the CBD states have the obligation to exchange information that is relevant to the conservation and sustainable use of biodiversity.⁴⁵² With transparency a problem in trophy hunting practices, range states should comply with the CBD and share relevant information of the industry.⁴⁵³

⁴⁴⁵ Nowell & Bauer 2006 SSC 28.

⁴⁴⁶ Ibid.

⁴⁴⁷ Bauer et al 2006 SSC 37.

⁴⁴⁸ Lindsey et al 2013 (8) *PLoS* 2.

⁴⁴⁹ Biological resources include organisms and populations within ecosystems. See CBD preamble.

⁴⁵⁰ Ibid Art 2.

⁴⁵¹ Whitman et al 2007 (21) *CB* 593; Croes B, Funston P, Rasmussen G, Buij R, Saleh A, Tumenta P & de longh H "The impact of trophy hunting on lion (*Panthera leo*) and other large carnivores in the Benou Complex, northern Cameroon" 2011 (144) *Biological Conservation* 3065.

⁴⁵² CBD Art 17.

⁴⁵³ Ibid Art 8; Loveridge et al "Science and the Recreational Hunting of Lions" in *Recreational Hunting* 115.

As mentioned above, protected areas, established by the CBD, is one mechanism that may possibly help conserve and protect the African lion.⁴⁵⁴ However, hunting in protected areas is often unregulated and the lack of compliance of the trophy hunters is seen as a major threat to the species.⁴⁵⁵ Hunting concessions are also often allocated to significant portions of some protected areas.⁴⁵⁶

At a regional level, states party to the SADC should promote sustainable use of wildlife.⁴⁵⁷ The SADC also calls on states to endeavour to harmonise their national legal instruments governing hunting, conservation and sustainable use of wildlife resources.⁴⁵⁸ States are also required to harmonise the penalties for illegal wildlife hunting to comparable deterrent levels.⁴⁵⁹ Individuals who are charged with violating national laws governing the hunting of wildlife are to be extradited or sanctioned in their home country.⁴⁶⁰

A lack of regulation on the size, age and gender of lions for trophy hunting poses a large threat to the African lion population, with many connected impacts as seen in the previous Chapter.⁴⁶¹ This is provided for under the SADC where states are required to take measures to ensure conservation and sustainable use of wildlife which include:

“restrictions on the taking of wildlife; ... number, sex, size or age of specimens taken; and the locality”⁴⁶²

However in some range states, such as Namibia and Zimbabwe, there seems to be little restriction and regulation on these parameters, allowing males of all ages to be killed and allowing hunting in adjacent protected areas.⁴⁶³

⁴⁵⁴ Winterbach et al 2012 (43) *MR* 92; CBD Art8.

⁴⁵⁵ Lindsey et al 2013 (8) *PLoS* 2.

⁴⁵⁶ In West and Central Africa hunting concessions comprise around 70 per cent of protected areas. See Croes et al 2011 (144) *BioCon* 3065.

⁴⁵⁷ SADC Art 4(2)(a).

⁴⁵⁸ *Ibid* Art 6(2)(b).

⁴⁵⁹ *Ibid* Art 6(2)(c).

⁴⁶⁰ *Ibid* Art 6(2)(e).

⁴⁶¹ Lindsey et al 2013 (8) *PLoS* 2.

⁴⁶² SADC Art 7(3)(c).

⁴⁶³ Lindsey et al 2013 (8) *PLoS* 2; Kiffner 2008 (25) *Endangered* 3.

The African Convention adds more guidance at a regional level.⁴⁶⁴ This Convention allows hunting, killing, capture and collection of a Class B species if a relevant national authority grants authorisation.⁴⁶⁵ States are also required to adopt adequate legislation on hunting and the capture of fauna.⁴⁶⁶ This legislation needs to include proper regulation on the issuing of permits as well as prohibiting unauthorised methods.⁴⁶⁷

3.4.2 Instruments applicable to the hunting of captive-bred lions

The traditional concept of captive breeding was for the good of the wild lion populations and for conservation efforts.⁴⁶⁸ In keeping with this reasoning for captive breeding of lions, the CBD provides that states shall rehabilitate threatened species and reintroduce them into their natural habitats.⁴⁶⁹

However, it has become apparent that this outcome has changed and captive breeding is now for alternate reasons, which are removed from conservation efforts.⁴⁷⁰ The conditions in which these captive-bred lions live are often questionable and the popularity of this industry is threatening the wellbeing of wild populations.⁴⁷¹ However, there is currently no global animal welfare or animal rights legislation.⁴⁷²

Captive-breeding facilities and canned hunting are created and regulated at the discretion of individual states.⁴⁷³ However, some provisions from the international framework could apply. For example, provisions pertaining to the illegal taking or poaching of African lions from protected areas and the wild for this industry would be applicable.⁴⁷⁴ These provisions

⁴⁶⁴ Lindsey et al 2013 (8) *PLoS* 2.

⁴⁶⁵ African Convention Art VIII(1)(b); Sands & Peel *Principles* 481.

⁴⁶⁶ African Convention Art VII(2)(a)&(b).

⁴⁶⁷ *Ibid.*

⁴⁶⁸ Panel of Experts 2005 *Report* 42.

⁴⁶⁹ CBD Art 9(c).

⁴⁷⁰ Panel of Experts 2005 *Report* 42.

⁴⁷¹ Hargreaves 2010 (3) *JWCLAS* 13-14.

⁴⁷² IFAW "Universal Declaration for Animal Welfare" 2014 *International Fund for Animal Welfare* <http://www.ifaw.org/united-states/our-work/political-advocacy/udaw-universal-declaration-animal-welfare> (accessed 07.10.2014).

⁴⁷³ Hargreaves 2010 (3) *JWCLAS* 8.

⁴⁷⁴ Panel of Experts 2005 *Report* 21.

coincide with those mentioned in the section above on the regulation of wild hunting and protected areas.⁴⁷⁵

Additionally, provisions from the CBD preamble relate to the genetic threat associated with this industry.⁴⁷⁶ This genetic threat occurs if captive-bred lions come into contact with wild populations.⁴⁷⁷ States party to the CBD are expected to be conscious of the intrinsic and genetic value of biological diversity.⁴⁷⁸ States allowing hunting practices that provide contact between captive-bred lions⁴⁷⁹ and wild lions, disregard the importance of genetic value and biological diversity that the CBD emphasises.⁴⁸⁰

At a regional level the African Convention prohibits the capturing of wildlife from protected areas, specifically national parks, game reserves, and strict nature reserves.⁴⁸¹ However, if the capture is for scientific and management purposes and under the control of a competent authority then it is allowed.⁴⁸² Additionally, the listing of the African lion in Class B of the African Convention does allow for the capture of lions in other areas.⁴⁸³ However, this is under the permission and control of a relevant national authority.⁴⁸⁴

Conversely, lions that are raised in captive breeding institutions are often flown out to 'wild' areas in other parts of Africa.⁴⁸⁵ The lion is drugged so as to not travel far from the drop off point, and then easily killed by a trophy hunter.⁴⁸⁶ This practice violates the provision of the African Convention that states that the use of drugs is prohibited as a method of hunting.⁴⁸⁷

⁴⁷⁵ See Chapter 3 section 4.1.

⁴⁷⁶ Lindsey et al 2012 (42) SAJWR 19.

⁴⁷⁷ Ibid; CBD preamble.

⁴⁷⁸ CBD preamble.

⁴⁷⁹ Lions subject to genetic manipulation. See Lindsey et al 2012 (42) SAJWR 19.

⁴⁸⁰ Ibid; CBD preamble.

⁴⁸¹ African Convention Art III(d).

⁴⁸² Ibid.

⁴⁸³ Ibid Art VIII(1)(b).

⁴⁸⁴ Ibid.

⁴⁸⁵ Hargreaves 2010 (3) JWCLAS 17.

⁴⁸⁶ Ibid.

⁴⁸⁷ African Convention Art VII(2)(c)(2).

The international legal regime around trade in African lion trophies is applicable to this threat, but trade will be discussed in detail in the next section.⁴⁸⁸

3.5 Legal regime applicable to threats from trade

Lions, their parts and derivatives are traded legally and illegally at both local and international levels.⁴⁸⁹ In African countries there are medicinal and traditional uses for lion teeth, claws, whiskers, fat, bones, bile, testicles, heart, meat and tails.⁴⁹⁰ International trade consists of lion teeth, claws, skin, bones, skulls, meat and as well as live lions.⁴⁹¹ Recently, the illegal trade in lion cubs has also increased.⁴⁹²

One objective of the IUCN strategy for Eastern and Southern Africa is concerned with the prevention of illegal trade in lions and lion products, while promoting sustainable legal trade.⁴⁹³ Targets in reaching this objective include reviewing existing trade legislation, promoting the domestic implementation of CITES and reaching a regional consensus on sustainable utilisation of lions by the year 2011.⁴⁹⁴ The IUCN strategy for West and Central Africa encourages the control of trade in lion parts and products by proposing the set up of a control system on the by-products of lions and sensitising customs officials.⁴⁹⁵

3.5.1 Instruments applicable to both legal and illegal trade activities

The only international instrument that currently offers specific protection to the African lion is CITES.⁴⁹⁶ As seen earlier the African lion, its parts and derivatives, are used for recreational purposes and commercial purposes, both of which involve international trade.⁴⁹⁷ Thus, the African lion is listed on Appendix II of CITES.⁴⁹⁸ States party to CITES cannot partake in trade

⁴⁸⁸ Lindsey et al 2012 (42) *SAJWR* 18.

⁴⁸⁹ CITES 2012 *Database*.

⁴⁹⁰ Kasiki & Hamunyela 2014 *Animals Committee* 8.

⁴⁹¹ CITES 2012 *Trade Database*.

⁴⁹² Kasiki & Hamunyela 2014 *Animals Committee* 6.

⁴⁹³ Nowell & Bauer 2006 *SSC* 28.

⁴⁹⁴ *Ibid.*

⁴⁹⁵ Bauer et al 2006 *SSC* 37.

⁴⁹⁶ CITES Appendix II; Place et al 2011 *IFAW* 45.

⁴⁹⁷ Place et al 2011 *IFAW* 45.

⁴⁹⁸ *Ibid.*

involving the African lion unless in accordance with the relevant provisions of CITES.⁴⁹⁹

To trade in any part or derivative of an African lion an export permit is required from the exporting country.⁵⁰⁰ Presentation of that export permit to the country of import is also required.⁵⁰¹ To issue these export permits, the exporting state needs to ensure a number of conditions.⁵⁰² These include that a Scientific Authority has advised that the export will not be detrimental to the survival of African lion populations, and that a Management Authority is satisfied that the specimen was obtained legally.⁵⁰³ The Scientific Authority can advise the Management Authority on suitable measures to limit the granting of export permits for specimens when:

“the export of specimens of any such species should be limited in order to maintain that species throughout its range at a level consistent with its role in the ecosystems in which it occurs and well above the level at which that species might become eligible for inclusion in Appendix I”.⁵⁰⁴

However, as the seen in the previous chapter, the threat from trade to wild populations of the African lion is evident and on the rise.⁵⁰⁵

The Parties to CITES meet every two to three years to consider or adopt amendments to Appendix I and II amongst other reasons.⁵⁰⁶ In 2004, at CoP13, Kenya submitted a Proposal to transfer the African lion from Appendix II to Appendix I.⁵⁰⁷ This Proposal was due to growing concern for the species’ survival in the wild as well as the increasingly fragmented nature of populations.⁵⁰⁸ The Proposal was however withdrawn and range states

⁴⁹⁹ CITES Art II(4).

⁵⁰⁰ Ibid Art IV(2)&(4); Place et al 2011 *IFAW* 45.

⁵⁰¹ Ibid.

⁵⁰² Ibid.

⁵⁰³ CITES Art IV(2).

⁵⁰⁴ Ibid Art IV(3).

⁵⁰⁵ See Chapter 2 section 4; Kasiki & Hamunyela 2014 *Animals Committee* 14; Hargreaves 2010 (3) *JWCLAS* 163.

⁵⁰⁶ Sands & Peel *Principles* 472.

⁵⁰⁷ CITES Resolution “Review of Significant Trade in Specimens of Appendix II species” 2004 *Conf. 12.8/Rev.CoP13*

⁵⁰⁸ Ibid.

agreed that a series of regional conservation workshops would be held, organised by the IUCN.⁵⁰⁹

Then in 2011 at the 25th CITES Animals Committee meeting⁵¹⁰ the inclusion of the African lion in the Periodic Review was approved.⁵¹¹ Kenya and Namibia volunteered to conduct this Review in consultation with 15 range states.⁵¹² This Review concluded that African lions should stay on Appendix II, due the species meeting a criterion for the inclusion of species in Appendix II.⁵¹³ Criterion B states that:

“It is known, or can be inferred or projected, that regulation of trade in the species is required to ensure that the harvest of specimens from the wild is not reducing the wild population to a level at which its survival might be threatened by continued harvesting or other influences”.⁵¹⁴

The Review added that there is no science-based information to conclude a historical decline in populations due to trade.⁵¹⁵ They decided that because there has not been a 50 per cent decline in populations in the last ten years and that habitat loss and retaliatory killing are the two main threats driving current decline and not international trade, the African lion should stay on Appendix II.⁵¹⁶

Furthermore, at the 13th CoP, states party to CITES recognised the importance of implementing Article IV of the Convention, and so, formed a Resolution around it.⁵¹⁷ This Article is concerned with the regulation of trade specimens of Appendix II species.⁵¹⁸ States agreed that this implementation

⁵⁰⁹ Nowell & Bauer 2006 SSC 3.

⁵¹⁰ Established at CoP6 to provide scientific advice and guidance regarding species of animals that are, or may become, subject to CITES trade controls, and so provide technical support in decision-making under CITES. See CITES 2014 *Animal Committee* http://www.cites.org/eng/disc/ac_pc.php (accessed 06.10.2014).

⁵¹¹ A Periodic Review is an assessment of the current state of a species to ensure that it is appropriately categorised in CITES Appendices. See Sands & Peel *Principles* 648; Kasiki & Hamunyela 2014 *Animals Committee* 1.

⁵¹² Ibid.

⁵¹³ Criterion B of Annex 2a. See CITES Resolution “Criteria for amendment of Appendices I and II” 2010 *Conf. 9.24/Rev.CoP15*.

⁵¹⁴ Ibid.

⁵¹⁵ Kasiki & Hamunyela 2014 *Animals Committee* 17.

⁵¹⁶ Ibid.

⁵¹⁷ CITES Resolution 2004.

⁵¹⁸ Ibid.

is essential for the conservation and protection of species listed in Appendix II and that national laws are fundamental in this regard.⁵¹⁹ The Resolution encourages the creation of a working system of national regulatory authorities as well as working inspection and border controls to ensure effective implementation of the Convention.⁵²⁰ This includes the monitoring of imports and exports subject to relative permit requirements.⁵²¹ But it has become clear that many developing states have not implemented Article IV due to lack of capacity and financial constraints.⁵²² Therefore growth in trade of African lion parts and derivatives goes unnoticed and uncontrolled.⁵²³

CITES, and the IUCN strategies, require states to take appropriate measures to enforce the provisions of the Convention and to prohibit trade that is in violation thereof.⁵²⁴ The National Legislation Project (NLP) was established in 1992 at CoP8.⁵²⁵ The NLP is aimed at analysing states legislation and providing legislative assistance where needed.⁵²⁶ Legislation of the Parties, once analysed, is categorised into three categories.⁵²⁷ Category 1 legislation meets the requirements for CITES implementation, Category 2 legislation does not meet all the requirements and Category 3 does not meet any requirements for implementation of CITES.⁵²⁸ In 2012 several major African lion exporting states were listed under Category 2, such as Botswana, Kenya, Nigeria, Mozambique, South Africa and Tanzania.⁵²⁹ Furthermore, several African lion exporting states were listed under Category 3, such as the Central African Republic, Chad and Ghana.⁵³⁰

⁵¹⁹ Ibid; Place et al 2011 *IFAW* 46.

⁵²⁰ Sands & Peel *Principles* 472.

⁵²¹ Ibid.

⁵²² Place et al 2011 *IFAW* 46; Kasiki & Hamunyela 2014 *Animals Committee* 14.

⁵²³ Ibid.

⁵²⁴ CITES Art VIII(1).

⁵²⁵ CITES Resolution "National laws for implementation of the Convention" 1992 *Conf. 8.4/Rev.CoP8*.

⁵²⁶ CITES Decision "Interpretation and implementation of the Convention" 2010 *CoP15/Doc. 20*.

⁵²⁷ CITES "National law for implementation of the Convention" 2012 *Notification to the Parties No.2012/036* <http://cites.org/sites/default/files/eng/notif/2012/E036.pdf> (accessed 07.10.2014).

⁵²⁸ Ibid.

⁵²⁹ Ibid at 4.

⁵³⁰ Ibid at 6.

At a regional level the African Convention regulates trade through Article IX, which is concerned with traffic in specimens and trophies.⁵³¹ This section contains particular provision for trade in animals listed in Class B.⁵³² The export of such specimens and trophies is subject to an authorisation.⁵³³ Requirements of such an authorisation are additional to the relevant permit for hunting/capture of the species.⁵³⁴ Authorisations should include information on the destination of the export and proof of legal acquirement of the species.⁵³⁵ Presentation of this authorisation is required at the place of import as well as in transit.⁵³⁶ If exported illegally the specimen will be confiscated.⁵³⁷

Additionally, the Lusaka Agreement could play a role in African lion trade regulation at a regional level.⁵³⁸ The Agreement aims at facilitating cooperation between states on issues of illegal trade in wild fauna and flora.⁵³⁹ It does so by providing for the establishment of a Task Force, which has a variety of functions, and programmes for different species.⁵⁴⁰ However, no specific programme has yet been aimed at the illegal trade in the African lion.⁵⁴¹ Therefore, the Agreement is ineffective at the moment. Still, it could play a role in the future, if illegal trade is realised and such programmes are created.⁵⁴² To ensure effective enforcement of the Agreement, Parties are expected to adopt and enforce administrative and legislative measures in that regard, however no range states have done so yet.⁵⁴³

At a national level the issues regarding trade in African lion continue.⁵⁴⁴ It has become evident that the South African Government does not believe that the increased trade in African lion bones is detrimental to the survival of

⁵³¹ African Convention Art IX.

⁵³² Ibid Art IX(2)(b).

⁵³³ Ibid.

⁵³⁴ Ibid.

⁵³⁵ Ibid.

⁵³⁶ Ibid Art IX(2)(c).

⁵³⁷ Ibid.

⁵³⁸ Lusaka Agreement; Place et al 2011 *IFAW* 49.

⁵³⁹ Lusaka Agreement 2014 *Task Force*.

⁵⁴⁰ See Chapter 3 section 1.

⁵⁴¹ Place et al 2011 *IFAW* 49.

⁵⁴² Ibid.

⁵⁴³ Mrema E "Lusaka Agreement as a mechanism for enforcement of CITES" 2005 *Seventh International Conference on Environmental Compliance and Enforcement* 233.

⁵⁴⁴ Hargreaves 2010 (3) *JWCLAS* 23.

the species in the wild.⁵⁴⁵ In 2003, the Minister of then Water and Environmental Affairs, Ms Buyelwas Sonjica, was asked whether she would consider banning the export of lion bones from South Africa.⁵⁴⁶ She stated that the banning would only be considered when exports are negatively impacting the species in the wild, and that this was not the case.⁵⁴⁷ With the very obvious increase in trade in African lion over the years, Sonjica was asked this question again in 2013, but she gave the same response.⁵⁴⁸ It is thus evident that South Africa will not be taking steps to stop the establishment of this new lion bone industry.⁵⁴⁹ In 2006 it was proposed that all relevant legislation of lion range states be reviewed and amended to prohibit trade in lion bones.⁵⁵⁰ But as seen in South Africa, it is unlikely that these amendments will take place in all range states.⁵⁵¹ However, national law enforcement agencies that do seek to control illegal trade in wildlife, now have the support of the CITES secretariat which is part of the International Consortium on Combating Wildlife Crime.⁵⁵²

⁵⁴⁵ Ibid.

⁵⁴⁶ RSA Parliamentary question to Min Water and Environmental Affairs 2010 *Internal Question Paper No. 1 NW272E* <http://www.pmg.org.za/questions-and-replies/2010/02/24/questions-replies-no-101-125> (accessed 07.10.2014).

⁵⁴⁷ Ibid.

⁵⁴⁸ Hargreaves 2010 (3) JWCLAS 23.

⁵⁴⁹ Ibid.

⁵⁵⁰ Nowell & Bauer 2006 SSC 33.

⁵⁵¹ Hargreaves 2010 (3) JWCLAS 23.

⁵⁵² Sands & Peel *Principles* 479.

CHAPTER 4: ANALYSIS OF THE LEGAL REGIME

A coherent international, and regional, regime for the protection and conservation of the African lion is important.⁵⁵³ This is due to the transboundary nature of both the African lion population as well as the threats that affect the species.⁵⁵⁴ Cross-border movement of African lion populations occurs between many range states.⁵⁵⁵ Therefore, these populations require greater international recognition and protection to create harmonised action against current threats.⁵⁵⁶

Specific threats such as habitat loss and prey scarcity extend beyond national boundaries due to a myriad of factors.⁵⁵⁷ Such threats will need to be controlled by collective action of range states.⁵⁵⁸ The threat from trade also extends beyond the bounds of state territory. To combat this threat there will need to be cooperation from both range states as well as the international community.⁵⁵⁹ Furthermore, other threats to the African lion, such as retaliatory and traditional killing, and the trophy hunting industry, extend across state boundaries as they impact the lion population as a whole by reducing numbers and population growth.⁵⁶⁰ Creating conservation and protection obligations at an international level allows for more uniform action against these threats.⁵⁶¹ It also creates harmonised implementation and enforcement of relevant provisions at regional and local levels.⁵⁶² The above-mentioned legal regime contains both some positive and negative aspects with regards to action against the threats to the African lion.

⁵⁵³ Place et al 2011 *IFAW* 6.

⁵⁵⁴ *Ibid.*

⁵⁵⁵ Lion populations are connected across the boundaries of the following states: Botswana-South Africa, Mozambique-South Africa, Mozambique-Zimbabwe, Angola-Namibia-Botswana, Malawi-Mozambique, Malawi-Zambia, Mozambique-Tanzania, Malawi-Tanzania, Rwanda-Tanzania, Kenya-Tanzania, Ethiopia-South Sudan, Ethiopia-Kenya, Cameroon-Nigeria, Cameroon-Chad, Chad-CAR, CAR-South Sudan, Benin-Burkina Faso-Niger, Guinea-Senegal, Guinea-Guinea Bissau. See CMS Proposal 2014 11.

⁵⁵⁶ *Ibid.*

⁵⁵⁷ See Chapter 2 section 1.

⁵⁵⁸ Riggio et al 2013 (22) *BioCon* 18.

⁵⁵⁹ CMS Proposal 2014 15.

⁵⁶⁰ *Ibid* at 11-12.

⁵⁶¹ Sands & Peel *Principles* 512.

⁵⁶² *Ibid.*

4.1 Positive aspects of the regime

It is positive to see that the main threats to the African lion are covered at least, to some extent, by international law.⁵⁶³ Although mostly providing a broad framework, the applicable international and regional provisions do provide some guidance to range states as to how they should be managing such threats.⁵⁶⁴ The positive aspects of the international and regional regime relevant to each threat are discussed below.

4.1.1 Habitat protection

Habitat protection is well emphasised in the international regime. Although not targeting habitat protection specifically for African lions, conservation of biodiversity and ecosystems encourages savannah habitat protection. The IUCN strategies promote a range of mechanisms to reach the objective of conserving African lion habitat.⁵⁶⁵ Some of which coincide with provisions of the international Conventions and regional Agreements.⁵⁶⁶

The establishment of protected areas under the CBD encourages the restoration and maintenance of habitat in range states that is conducive to the survival of African lions and their prey.⁵⁶⁷ But, lions are also found outside of protected areas. Thus, the provisions of the CBD directing states to regulate and manage biodiversity adjacent to, and outside of, protected areas are also encouraging.⁵⁶⁸ The CBD Technical Series' on protected areas and protection of biodiversity in sub-humid landscapes also assists range states on how to encourage sustainable development and conservation of habitat.⁵⁶⁹

Additionally, although anthropocentric in nature, the UNCCD provides provisions for positive action by states to combat desertification and

⁵⁶³ Place et al 2011 *IFAW* 45.

⁵⁶⁴ From a regional standpoint, it is positive to see that there has been an increase in awareness on the need for protection and conservation of the African lion. Ten range states have developed, or have started developing, action plans for African lion populations. See CMS Proposal 2014 16; Sands & Peel *Principles* 92.

⁵⁶⁵ See Chapter 3 section 2.1.

⁵⁶⁶ *Ibid.*

⁵⁶⁷ CBD Art 8; Matz 2005 (65) *HJIL* 205.

⁵⁶⁸ CBD Art 8(c).

⁵⁶⁹ Ervin et al 2010 *CBD Technical Series*; Secretariat of the CBD et al 2013 *Technical Series*.

drought.⁵⁷⁰ These processes play a role in lion habitat degradation. If states attempt to mitigate these factors for human needs it follows that lion habitat will benefit as well.⁵⁷¹ The WHC and RAMSAR add to this by promoting the protection of certain sites and habitats that indirectly conserve habitat of some of the range of African lions.⁵⁷² In both instances states need to have at least one WHS or RAMSAR site to be party to the respective Conventions.⁵⁷³ This ensures that states take an active role in the obligations under the Conventions.⁵⁷⁴

Although the African lion is not yet listed under the CMS, the Convention still has some important provisions, which should ensure the protection of lion habitat.⁵⁷⁵ One principle of particular importance with regard to habitat is that range states are required to take individual or cooperative steps to conserve migratory species as well as their habitat.⁵⁷⁶ As mentioned above, the African lion population is transboundary in nature, therefore this provision is highly significant.⁵⁷⁷ The recent Proposal by the Kenyan Government to add the African lion to the CMS Appendix II is also encouraging.⁵⁷⁸ It is hoped that the outcome of the Resolution, stemming from that Proposal, will bring about positive action and results from range states.⁵⁷⁹

What is also particularly positive about some of the above Conventions is that they encourage the education of communities around land use change and the impact on ecosystems and habitats.⁵⁸⁰ They also encourage states to promote awareness around the need to conserve biodiversity.⁵⁸¹ Education and awareness is necessary in habitat protection to help growing communities develop in a way that is least harmful to the surrounding

⁵⁷⁰ UNCCD 2012 *About the Convention*.

⁵⁷¹ Bauer et al 2006 SSC 19.

⁵⁷² WHC 2014 *World Heritage List*; Kabii T "An overview of African wetlands" in *Wetlands*.

⁵⁷³ RAMSAR Art 2(4); WHC Art 3.

⁵⁷⁴ *Ibid*.

⁵⁷⁵ CMS Art II.

⁵⁷⁶ *Ibid* Art II(1).

⁵⁷⁷ CMS Proposal 2014 11.

⁵⁷⁸ *Ibid* at 14.

⁵⁷⁹ See Chapter 3 section 2.1; CMS Draft Resolution 2014.

⁵⁸⁰ CBD Art 13(a); WHC Art 27(1); UNCCD Art19.

⁵⁸¹ *Ibid*.

environment and wildlife.⁵⁸² It is often the activities of expanding human populations and development that heavily degrade lion habitat.⁵⁸³ The SADC has enhanced this requirement by encouraging education and awareness around conservation of wildlife at a regional level.⁵⁸⁴

Regionally, the listing of the African lion under the African Convention provides much needed species-specific protection across Africa.⁵⁸⁵ The Convention includes the protection of African lion habitat necessary for the survival of the species.⁵⁸⁶ This provision is important as it encourages range states to work together to ensure that African lions and their habitat are protected.⁵⁸⁷

4.1.2 Lion prey scarcity

As stated throughout this dissertation, protection and conservation of African lion habitat will also impact the survival of their prey. Thus the encouraging aspects of the Conventions mentioned above apply to ungulate species survival too.

The emphasis on sustainable use of biological resources by the CBD also encourages range states to promote the wise-use of natural resources by communities.⁵⁸⁸ The mechanisms established by CITES and the CBD to combat the rise in bushmeat and bushmeat trade are commendable.⁵⁸⁹ This realisation of cross-border and international trade in bushmeat is essential in combating such activity.⁵⁹⁰ The set up of a CITES Working Group in collaboration with a CBD Liaison Group for such activity may have an impact on reducing the persistence of this industry and trade in bushmeat.⁵⁹¹

As stated above one of the reasons for a broader approach to addressing these threats is to form holistic and harmonised action against

⁵⁸² Bauer et al 2006 SSC 19.

⁵⁸³ Ibid.

⁵⁸⁴ SADC Art 7(7).

⁵⁸⁵ African Convention Art VIII(1).

⁵⁸⁶ Ibid.

⁵⁸⁷ Ibid.

⁵⁸⁸ For example, natural resources such as ungulate species used for meat and other purposes. See CBD Art 2.

⁵⁸⁹ Lindsey et al 2012 *WCS Report* 13.

⁵⁹⁰ Ibid.

⁵⁹¹ Ibid.

these threats. The SADCPC does just this, in the context of habitat and prey scarcity, by the establishment of the Wildlife Sector Technical Committee.⁵⁹² The important aspect of this Technical Committee, for the conservation of lion prey, is the development of policy guidelines for a regional approach to conservation and sustainable use of wildlife.⁵⁹³ Additionally, states party to the SADCPC are encouraged to standardise wildlife protection measures for wildlife and habitat.⁵⁹⁴

4.1.3 Retaliatory and traditional killing

The protected areas established under the CBD provide for the much needed separation of humans and wildlife.⁵⁹⁵ If these areas are fenced then a physical barrier prevents human-lion conflict and retaliatory killing.⁵⁹⁶ However, the fencing of protected areas is a contentious issue.⁵⁹⁷ Some commentators believe that fences are vital in conserving lion populations.⁵⁹⁸ While others believe that fences hinder migratory movement of lions and threaten long-term viability of populations.⁵⁹⁹ These debates stem from limited information on the long-term effects of fencing, due to the costs of research in developing countries.⁶⁰⁰

The promotion of education and awareness through both regional and international Conventions and Agreements is possibly the most positive aspect of the regime in terms of this threat. Linked with this is the promotion of incentive based measures, through legal instruments, to engage communities in lion conservation and protection.⁶⁰¹ It is encouraging that some range states have begun to implement these provisions through the creation of incentive based programs for lion conservation.⁶⁰² The support of the international community in programs such as Lion Guardians provides

⁵⁹² SADCPC Art 5(7).

⁵⁹³ Ibid.

⁵⁹⁴ SADCPC Art 6.

⁵⁹⁵ Bauer et al 2006 SSC 19.

⁵⁹⁶ Creel et al 2013 (16) *EL* 3.

⁵⁹⁷ Massey A, King A, Fofopopoulos J "Fencing protected areas: A long-term assessment of the effects of reserve establishment and fencing on African mammalian diversity" 2014 (176) *Biological Conservation* 168.

⁵⁹⁸ Ibid.

⁵⁹⁹ Ibid.

⁶⁰⁰ Ibid at 163.

⁶⁰¹ Bauer et al 2006 SSC 23.

⁶⁰² Hazzah et al 2014 (28) *CB* 851.

the plight of the African lion with global, as well as local, attention.⁶⁰³ Linking lion conservation goals with the upliftment of communities, through incentive based measures, has led to the success of this program in areas of implementation.⁶⁰⁴ In entrenching lion conservation goals within community value systems, this program has led to long-term protection of African lions.⁶⁰⁵

Additionally, it is positive that range states are encouraged to prohibit unauthorised methods of hunting and capture under the African Convention.⁶⁰⁶ This should act as a deterrent to communities in killing lions in retaliation, especially with the use of poison, which is illegal in many African states.⁶⁰⁷ However, as will be stated below, the regulation of pesticide use and availability in this regard is questionable in reality.⁶⁰⁸

4.1.4 Trophy hunting industry

The sustainable use provisions of the CBD are also a positive starting point for states when considering the trophy hunting industry in their territory.⁶⁰⁹ The CBD encourages states to use wildlife in a sustainable manner and promotes the exchange of information.⁶¹⁰ This could be beneficial to combat the lack of transparency in the industry.⁶¹¹ The Convention's provisions on the establishment of protected areas are also constructive conservation efforts.⁶¹² According to international and regional instruments, lions in these areas are to be protected from both hunting and capture.⁶¹³ This has an impact on the availability of lions for trophy hunting, as well as the poaching of lions for the captive-bred industry.⁶¹⁴

The regional regime governing this threat is perhaps slightly more comprehensive than the international regime. The SADC requires a

⁶⁰³ Ibid at 852.

⁶⁰⁴ Ibid at 858.

⁶⁰⁵ Ibid.

⁶⁰⁶ African Convention Art VII.

⁶⁰⁷ Ogada 2014 (1332) *ANYAS* 1.

⁶⁰⁸ Ibid at 14.

⁶⁰⁹ CBD preamble.

⁶¹⁰ Ibid Art 17; Lindsey et al 2013 (8) *PLoS* 2

⁶¹¹ Ibid.

⁶¹² CBD Art 8; Winterbach et al 2012 (43) *MR* 92.

⁶¹³ African Convention Art III(d); CBD Art 8.

⁶¹⁴ Panel of Experts 2005 *Report* 21.

harmonised approach among states around legal instruments governing conservation and sustainable use.⁶¹⁵ The penalties for illegal hunting of wildlife are also to be uniform across range states.⁶¹⁶ The African Convention adds to this by specifically listing the African lion as a species of concern. This requires states to adopt adequate legislation on hunting and capture of lions, in unprotected areas, through a permitting scheme.⁶¹⁷

Some range states' concern over the sustainability of the trophy hunting industry is evident by the increase of state bans on trophy hunting activities.⁶¹⁸ Zambia, Botswana, and Kenya all have bans on the practice of lion trophy hunting.⁶¹⁹

4.1.5 Trade activities

The position of the African lion on Appendix II of CITES is one of the more positive aspects of the international regime. States exporting African lions, their parts or derivatives, need to meet the conditions of the Convention for such a listed species.⁶²⁰ Having these export provisions at an international level promotes the creation of harmonised domestic trade legislation in range states.⁶²¹ Having the Scientific Authority advise on the impact of trade on the species concerned, and the Management Authority ensuring the legality of the specimen, allows for a comprehensive regime to ensure trade is sustainable.⁶²²

It is also encouraging that the fate of the African lion has not gone unnoticed by CITES Parties.⁶²³ This is evidenced by inter alia the following. First, in 2004 at CoP13 when the Kenyan Government submitted a Proposal to move the African lion from Appendix II to Appendix I.⁶²⁴ Then, at the

⁶¹⁵ SADC Art 6(2)(b).

⁶¹⁶ Ibid Art 6(2)(c).

⁶¹⁷ African Convention Art VII(2)(a)&(b).

⁶¹⁸ Packer C, Whitman K, Loveridge A, Jackson J & Funston P "Impacts of Trophy Hunting on Lions in East and Southern Africa: Recent offtake and future recommendations" 2006 *Southern African Conservation Workshop* 3; Flocken J "Banding together to ban trophy hunting" 2013 *International Fund for Animal Welfare* <http://www.ifaw.org/united-states/news/banding-together-ban-trophy-hunting> (accessed 16.01.2015).

⁶¹⁹ Packer et al 2006 SACW 3.

⁶²⁰ See Chapter 3 section 5.1; CITES Art IV(2).

⁶²¹ Nowell & Bauer 2006 SSC 28.

⁶²² CITES Art IV(2); Place et al 2011 *IFAW* 45.

⁶²³ See Chapter 3 section 5.1.

⁶²⁴ CITES Resolution 2004; Nowell & Bauer 2006 SSC 3.

CITES Animals Committee meeting in 2011, where it was agreed that the African lion listing would be subject to a Periodic Review.⁶²⁵ Additionally, the important trade provisions of CITES are found in the African Convention, which promotes regional consistency with the international trade regime.⁶²⁶

Illegal trade is addressed in the Lusaka Agreement.⁶²⁷ States party to the Agreement are obligated to take appropriate measures to investigate and prosecute cases of illegal trade.⁶²⁸ The Task Force, established by the Agreement, has been successful in the recovery of illegally traded elephant specimens, as well as being involved in the arrest of cross-border poachers.⁶²⁹ Given adequate time and resources the same could be achieved for the illegal trade in African lions, their parts and derivatives.⁶³⁰

4.2 Negative aspects of the regime

There are mechanisms within the mentioned Conventions and Agreements that may deal with conservation, management and protection of the African lion. However, some commentators believe that the implementation and enforcement of these regulatory mechanisms are inadequate in addressing the increasing threats to the species.⁶³¹ The negative aspects of the international and regional regime relevant to each threat are discussed below.

4.2.1 Habitat protection

As highlighted previously, the main CBD provision protecting the habitat of African lions is the establishment of protected areas in range states, as well as the protection of land adjacent to these areas.⁶³² However, in reality this provision has not been met by some range states, as there is increasing use

⁶²⁵ Kasiki & Hamunyela 2014 *Animals Committee* 1.

⁶²⁶ African Convention Art IX.

⁶²⁷ Lusaka Agreement Art 4(1).

⁶²⁸ Ibid.

⁶²⁹ Mrema 2005 *Compliance and Enforcement* 238.

⁶³⁰ Ibid.

⁶³¹ Some commentators believe that the 2006 IUCN strategies, mentioned throughout this dissertation, have not been sufficiently implemented in range states, and have not reversed declining lion population trends thus far. See CMS Proposal 2014 16; Place et al 2011 *IFAW* 45.

⁶³² CBD Art 8; Matz 2005 (65) *HJIL* 230.

of land within and adjacent to protected areas.⁶³³ It should also be noted that the wording of the provision is weak in that it affords states a wide discretion to decide on the extent and condition of protected areas, and adjacent land, in their jurisdiction.⁶³⁴ Consequently, protected areas are considered ineffective by commentators such as Geldmann et al.⁶³⁵ Geldmann et al suggest that states lack sufficient management capacity to deliver required conservation standards of these areas.⁶³⁶ Linked to this, regarding the Aichi Target of terrestrial protected areas, commentators' suggest that even if global coverage is achieved, effective and equitable management of these areas is unlikely without monitoring and adaptation at local levels.⁶³⁷

This discretionary issue follows in the management or creation of a WHS under the WHC. Range states have the discretion as to what measures are taken to protect and conserve a WHS in their territory, be it for cultural or natural reasons.⁶³⁸ Therefore if states don't take the initiative to conserve the natural integrity of their WHS then the WHC has no tangible impact on lion habitat conservation.⁶³⁹ The Ngorongoro Conservation Area in Tanzania is one such WHS that has made little difference to the protection and conservation of the lion habitat of that area.⁶⁴⁰ Even with a WHS listing, the lions in the Ngorongoro Conservation Area are decreasing in numbers due to increased human settlements in the area, land use changes and degradation of habitat.⁶⁴¹ Contributing to this problem is that there has been no maintenance of wildlife corridors outside of the Area, which means that lion populations have become isolated.⁶⁴² This issue prevails across the continent. In West Africa for example, Comoe National Park is the largest

⁶³³ CBD Art 8(c); Winterbach et al 2012 (43) *MR* 101.

⁶³⁴ The wording 'as far as possible and appropriate' in the chapeau to Article 8 affords this discretion. See CBD Art 8.

⁶³⁵ Geldmann et al 2013 (161) *BioCon* 230.

⁶³⁶ *Ibid.*

⁶³⁷ *Ibid.*

⁶³⁸ Riggio et al 2013 (22) *BioCon* 30.

⁶³⁹ *Ibid.*

⁶⁴⁰ Kissui B, Mosser A & Packer C "Persistence and local extinction of lion prides in the Ngorongoro Crater, Tanzania" 2010 (52) *Population Ecology* 110.

⁶⁴¹ *Ibid.*

⁶⁴² Estes R, Atwood J & Estes A "Downward trends in Ngorongoro Crater ungulate populations 1986-2005: Conservation concerns and the need for ecological research" 2006 (131) *Biological Conservation* 114.

Park in the region and is also a WHS.⁶⁴³ The Park used to be home to a number of African lions as well as their prey.⁶⁴⁴ Now there are no lions in existence and prey is very scarce due to habitat destruction by livestock grazing, as well as poaching.⁶⁴⁵

The RAMSAR Convention's role in habitat protection is similar to that of the WHC, and so has similar issues. Although RAMSAR provides the means for protection of certain important wetlands, and these wetlands play a vital role in lion habitat and prey protection, the implementation of these provisions by range states is also questionable.⁶⁴⁶ In Burkina Faso for example, there are three RAMSAR sites that have problems of over grazing, pollution, over-exploitation of wood resources and illegal exploitation of ungulate species.⁶⁴⁷ These factors undermine the status of the wetlands, and contribute to habitat degradation.⁶⁴⁸ Thus, many RAMSAR sites continue to deteriorate, and are often destroyed through land use change.⁶⁴⁹ Loss of wetlands continues as well as the loss of dependent species on these wetlands.⁶⁵⁰ Many range states lack implementation capacity and political will to ensure collaborative implementation of RAMSAR principles and approaches.⁶⁵¹

It is also important to mention that although the African Convention contains some novel and significant provisions that could provide habitat protection, ten of the thirty-two African lion range states are not party to the Convention thus providing insufficient protection across the range of the species.⁶⁵²

⁶⁴³ Riggio et al 2013 (22) *BioCon* 30.

⁶⁴⁴ Ibid.

⁶⁴⁵ Ibid.

⁶⁴⁶ Gardener & Davidson "The Ramsar Convention" in *Wetlands* 200.

⁶⁴⁷ Ramsar Convention 2014 *Briefing Notes: Burkina Faso*

http://www.ramsar.org/cda/en/ramsar-pubs-notes-anno-burkina/main/ramsar/1-30-168%5E16690_4000_0__ (accessed 06.10.2014).

⁶⁴⁸ Ibid.

⁶⁴⁹ Gardener & Davidson "The Ramsar Convention" in *Wetlands* 200.

⁶⁵⁰ Ibid at 201.

⁶⁵¹ Ibid.

⁶⁵² Additionally, the African Convention is seen as an unsuccessful tool for African lion conservation as it does not establish a Secretariat or designate the role of the Conference of the parties. The Convention also does not contain enforcement measures to address non-compliance with the Convention. See Place et al 2011 *IFAW* 47-48.

4.2.2 Lion prey scarcity

The negative aspects highlighted above also impact the survival and abundance of African lion prey. Additionally, there are no mechanisms in the international regime promoting the specific monitoring of prey populations to provide a balance between commercial hunting and lion needs.⁶⁵³

The African Convention lists some ungulate species that require protection, but not all, and these species can also be hunted with the required authorisation.⁶⁵⁴ But again not all African lion range states are party to this Convention, therefore in those states ungulate species are only protected through domestic laws, if any are applicable.⁶⁵⁵ However, the sustainable use provisions of the CBD and the SADCPC could apply in this regard.⁶⁵⁶

4.2.3 Retaliatory and traditional killing

Due to the local nature of retaliatory and traditional killing the international framework, although providing some broad guidance, falls short on providing specific mitigating measures for this threat.⁶⁵⁷ Although the CBD does encourage the establishment of protected areas, the value of these areas is still debated.⁶⁵⁸ Commentators disagree on their effectiveness in lion protection and human conflict mitigation.⁶⁵⁹ Some issues with fencing protected areas are that they can have ecological, economic and social effects.⁶⁶⁰ This is evident in range states where fences are often ineffective as they break, are unkempt and materials are used for other purposes such as wire snare poaching.⁶⁶¹ These protected areas are often poorly managed, lacking adequate law enforcement and regulation.⁶⁶²

The CBD does however add to these provisions by encouraging the development and maintenance of legislation to protect threatened species at

⁶⁵³ Bauer et al 2006 *SSC* 22.

⁶⁵⁴ African Convention Art VIII(1).

⁶⁵⁵ Place et al 2011 *IFAW* 47.

⁶⁵⁶ CBD Art 2; SADCPC Art 5(7).

⁶⁵⁷ Packer & Kissui 2007 *Transactions* 5.

⁶⁵⁸ Massey et al 2014 (176) *BioCon* 163.

⁶⁵⁹ *Ibid.*

⁶⁶⁰ Creel et al 2013 (16) *EL* 3.

⁶⁶¹ *Ibid.*

⁶⁶² *Ibid.*

national level.⁶⁶³ Even though this provision is binding, states are given discretion as to the level of protection provided.⁶⁶⁴ This wide discretion is evident in the lack of national legislation directed at African lion protection in many range states, resulting in retaliatory killing going unpunished.⁶⁶⁵

Poison is often used to kill lions in an area where they have harmed livestock or people.⁶⁶⁶ The poisons used for retaliatory killing, often in the form of pesticides, are easily available and are not adequately regulated.⁶⁶⁷ Most of the pesticides are banned in developed countries but remain legally registered and accessible throughout Africa.⁶⁶⁸ One example of this is Carbofuran, which is increasing in use in retaliatory killing of lions.⁶⁶⁹ The Rotterdam Convention has the potential to involve the international community in combating the use of these pesticides for poisoning.⁶⁷⁰ Almost all lion range states are party to the Convention, except for Angola, Central African Republic and South Sudan.⁶⁷¹ However, even some listed pesticides on Annex III of the Convention, such as Aldicarb and Dieldrin, are still being used in range states to kill wildlife.⁶⁷² As stated, the CMS could provide more protection against these harmful substances, but this is only encouraged for listed species under the Convention, which the African lion is not.⁶⁷³

4.2.4 Trophy hunting industry

The dominant negative aspect of the regime governing the trophy hunting industry is that enforcement of applicable international and regional provisions mentioned above is largely lacking.⁶⁷⁴ Range states are not harmonised in their approach to trophy hunting.⁶⁷⁵ Some states have

⁶⁶³ CBD Art 8(k).

⁶⁶⁴ The wording 'as far as possible and appropriate' in the chapeau to Article 8 affords this discretion. See *Ibid.*

⁶⁶⁵ Kasiki & Hamunyela 2014 *Animals Committee* 14-17.

⁶⁶⁶ Ogada 2014 (1322) *ANYAS* 1.

⁶⁶⁷ *Ibid* at 13.

⁶⁶⁸ *Ibid.*

⁶⁶⁹ *Ibid.*

⁶⁷⁰ *Ibid.*

⁶⁷¹ *Ibid* at 5.

⁶⁷² *Ibid* at 5 & 9. Annex III of the Rotterdam Convention lists pesticides that have been banned or restricted for environmental and health reasons. See Rotterdam Convention Annex III.

⁶⁷³ See Chapter 3 section 3.1; CMS Art V(5)(i).

⁶⁷⁴ Lindsey et al 2013 (8) *PLoS* 2.

⁶⁷⁵ *Ibid* at 9.

imposed bans on the activity, some have incorporated certain sustainable methods into the industry, while others have no regulation at all.⁶⁷⁶ There is also no standard on lion age and sex restrictions across range states, and the restrictions that are in place lack enforcement.⁶⁷⁷

Additionally, the unregulated hunting of lions in protected areas is in contravention of some CBD provisions.⁶⁷⁸ Unregulated trophy hunting in protected areas in West Africa has Croes et al suggesting a moratorium of five years on African lion hunting in the region.⁶⁷⁹ They suggest that during this time a management plan for lion hunting should be established.⁶⁸⁰ This would allow African lion populations' time to recover.⁶⁸¹ However, they also suggest that after this moratorium there would need to be drastic changes in protected area management to allow for sustainable hunting of lions.⁶⁸²

The captive-bred lion industry and canned lion hunting are mostly unregulated from an international perspective.⁶⁸³ These activities are at the discretion of individual states.⁶⁸⁴ Even though there is a call for a more harmonised approach to legislation and regulations around this, states have predominantly made decisions on management in isolation.⁶⁸⁵ Due to growing concerns over the captive-bred industry in South Africa, the Government developed regulations for the industry.⁶⁸⁶ These regulations only allow the hunting of captive-bred large predators after the animal has been released into the wild for more than 2 years.⁶⁸⁷ However, lion-breeding associations challenged these regulations.⁶⁸⁸ This resulted in the de-listing of

⁶⁷⁶ Packer et al 2006 *SACW* 8.

⁶⁷⁷ Lindsey et al 2013 (8) *PLoS* 8.

⁶⁷⁸ CBD Art 8.

⁶⁷⁹ Croes et al 2011 (144) *BioCon* 3070.

⁶⁸⁰ *Ibid.*

⁶⁸¹ *Ibid.*

⁶⁸² *Ibid.*

⁶⁸³ Funston P "Conservation and management of lion in Southern Africa: status, threats, utilisation and restoration option" in Croes B, Buij R, de longh H, & Bauer H (eds) *Management and conservation of large carnivores in West and Central Africa* (2006) Proceedings of an international seminar on the conservation of small and hidden species Cameroon 125.

⁶⁸⁴ *Ibid.*

⁶⁸⁵ *Ibid.*

⁶⁸⁶ Lindsey et al 2012 (42) *SAJWR* 12.

⁶⁸⁷ *Ibid.*

⁶⁸⁸ *South African Predator Breeders Association and Others v Minister of Environmental Affairs and Tourism* (1900/2007) [2009] ZAFSHC 68.

lions as large predators.⁶⁸⁹ This ultimately made the regulations null and void to the captive-bred lion industry and associated trophy hunting activities.⁶⁹⁰

4.2.5 Trade activities

Although CITES Parties have paid attention to the status of trade in African lions, their parts and derivatives, some commentators have criticised the outcome of the recent Periodic Review.⁶⁹¹

Such criticisms include inconsistency, outdated and ultimately irrelevant to the current state of the African lion.⁶⁹² It would be beyond the scope of this dissertation to explore these concerns in detail, but in essence they amount to three main issues. Firstly, some of the range states that were consulted were insignificant contributors of information as lions are regionally extinct in their territory.⁶⁹³ Secondly, the data that was used was outdated.⁶⁹⁴ For example, CITES data was used between the period 1999 to 2008, and lion population surveys that were used were 12 years old.⁶⁹⁵ Lastly, emphasis was given to the commercial value of trophy hunting, while actions over the concern of trophy hunting impacts on wild populations were all ignored in the Review.⁶⁹⁶ Actions such as the recent 2013 moratorium in Zambia on lion trophy hunting, the banning of trophy hunting in Uganda, and Cameroon's refusal to issue trophy export permits over the last four years.⁶⁹⁷ Furthermore there were factual mistakes and errors of omission, which ultimately failed to deliver sound conclusions relevant to the status of African lion populations in reality.⁶⁹⁸

⁶⁸⁹ Ibid.

⁶⁹⁰ This judgment is interesting as it deals with regulatory responses to moral concerns and weighs up economic and ethical considerations of the industry. See Hall J "Building the ethical dimension of the environmental right" 2010 (17) *South African Journal of Environmental Law and Policy* 1.

⁶⁹¹ Macsween C "The CITES draft Periodic Review on lions is disgrace and could do great damage to lions" 2014 *LionAid* <http://www.lionaid.org/news/2014/04/the-cites-draft-periodic-review-on-lions-is-a-disgrace-and-could-do-great-damage-to-lions.htm> (accessed 07.10.2014).

⁶⁹² Ibid.

⁶⁹³ Ibid.

⁶⁹⁴ Ibid.

⁶⁹⁵ Ibid.

⁶⁹⁶ Ibid.

⁶⁹⁷ Ibid.

⁶⁹⁸ Ibid.

In addition to these issues with the Review, when Parties are to consider any Proposal to amend an Appendix they are required to:

“by virtue of the precautionary approach, and in case of uncertainty either as regards the status of a species or the impact of trade on the conservation of a species, act in the best interest of the conservation of the species concerned and adopt measures that are proportionate to the anticipated risks to the species”⁶⁹⁹

Due to the uncertainties around both legal and illegal trade statistics of African lion parts and derivatives, it would be in contravention of this principle, to not act in the best possible way to conserve the African lion and protect the species from the possible threat from trade.⁷⁰⁰ Thus the listing of the African lion to CITES Appendix I would in fact seem more appropriate.⁷⁰¹

The outcome of the CITES NLP in 2012 is also worrying.⁷⁰² The trade legislation of many range states is listed as either Category 2 or 3, which means that their legislation does not meet all or any of the CITES requirements.⁷⁰³ This contributes to the reasons why the legal trade in African lion parts and derivatives is being questioned.⁷⁰⁴ Even though African lion range states are party to CITES, many do not have the necessary legislation to fully implement the relevant provisions of CITES.⁷⁰⁵ Thus, the protective nature of this Convention is compromised.⁷⁰⁶ As trade demands increase for Medicinal and Traditional uses in Africa, and increasingly in Asia, ineffective compliance and enforcement of CITES by range states will result in uncontrollable and unknown trade activity.⁷⁰⁷ Nevertheless, the African Convention does provide similar trade provisions for range states to adopt.⁷⁰⁸ However, as noted earlier, the African Convention lacks institutional

⁶⁹⁹ CITES Resolution 2010.

⁷⁰⁰ Hargreaves 2010 (3) JWCLAS 163; Nowell & Bauer 2006 SSC 26.

⁷⁰¹ Nowell & Bauer 2006 SSC 26.

⁷⁰² See Chapter 3 section 5.1.

⁷⁰³ CITES 2012 *Notification to the Parties No.2012/036* 4.

⁷⁰⁴ Place et al 2011 *IFAW* 47.

⁷⁰⁵ *Ibid.*

⁷⁰⁶ *Ibid.*

⁷⁰⁷ Kasiki & Hamunyela 2014 *Animals Committee* 14.

⁷⁰⁸ Sands & Peel *Principles* 481.

arrangements for its implementation, which contributes to its ineffectiveness.⁷⁰⁹

The new demand for lion meat, and the rising illegal trade of lion cubs and lion bone are distressing.⁷¹⁰ The persistence of these illegal activities is largely due to ineffective enforcement of laws.⁷¹¹ There is also a lack of knowledge around these trade markets, as well as weak capacity and low motivation within law enforcement agencies.⁷¹² This makes the illegal activity go largely unnoticed.⁷¹³

The Lusaka Agreement has the potential to increase enforcement measures through the establishment of the Task Force.⁷¹⁴ The Task Force has had some success thus far, but there has been no initiative to target the illegal trade in lion parts and derivatives.⁷¹⁵ In adopting a program for this illegal trade, range states party to the Agreement would need to establish National Bureaus to work in close liaison with the Task Force.⁷¹⁶ However, only five range states have done so.⁷¹⁷ Furthermore, the Task Force does not recognise the African lion as being an animal that is adversely affected by illegal trade.⁷¹⁸ Therefore activity of this nature often falls under the radar.⁷¹⁹

These positive and negative aspects show the degree of complexity of an international regime in governing a specific species. The provisions needed to combat the threats to the African lion are present, especially for habitat and prey protection, but it is often the enforcement of these provisions at local levels that undermines their effectiveness.⁷²⁰ Due to the local nature of threats from retaliatory killing and trophy hunting, the international regime

⁷⁰⁹ Ibid.

⁷¹⁰ CMS Proposal 2014 13; Hargreaves 2010 (3) JWCLAS 20.

⁷¹¹ CMS Proposal 2014 13.

⁷¹² Ibid.

⁷¹³ Ibid.

⁷¹⁴ Lusaka Agreement.

⁷¹⁵ Mrema 2005 *Compliance and Enforcement* 238.

⁷¹⁶ The National Bureaus are to work in close liaison with the Task Force. The functions of the National Bureau are providing and receiving information from, and coordinating with, the Task Force on illegal trade. See Ibid at 233-234

⁷¹⁷ Ibid.

⁷¹⁸ Lusaka Agreement 2014 *Task Force*.

⁷¹⁹ Ibid.

⁷²⁰ Geldmann et al 2013 (161) *BioCon* 230; Winterbach et al 2012 (43) *MR* 101.

falls short of supplying a targeted response to these actions.⁷²¹ Although the threat from trade is managed through a variety of bodies and instruments, the increase in both legal and illegal trade is cause for concern if this increase is not addressed immediately.⁷²²

4.3 Weighing up the legal regime

The purpose of this dissertation was to determine whether the international legal regime for the African lion is effective in achieving their protection and survival. Although the regime as a whole possesses some positive features, it is undermined by the negative aspects, which persist throughout. The international regime may then be insufficient in ensuring the protection and survival of the African lion. This is due to the following findings, which mostly stem from unregulated elements of each threat.

Firstly, lions need adequate habitat to survive in the wild.⁷²³ Without an area conducive to their survival, lion prides will decrease in size and populations will continue to decline.⁷²⁴ As human populations continue to increase, viable lion habitat is being converted into agricultural land and developments.⁷²⁵ The international law in place to decrease habitat degradation is broad and difficult to implement with growing human populations dependent on the surrounding environment.⁷²⁶ Legal provisions have encouraged range states to establish protected areas, to keep some wildlife habitat pristine.⁷²⁷ However, there are not enough of these protected areas.⁷²⁸ The ones that do exist are not big enough, nor are they connected to allow population interaction, and are often inadequately managed.⁷²⁹ Therefore the regime applicable to the threat of habitat protection is insufficient as it does not cover the range of the African lion.⁷³⁰ A range

⁷²¹ Bauer et al 2006 SSC 22.

⁷²² CMS Proposal 2014 13.

⁷²³ Riggio et al 2013 (22) *BioCon* 18.

⁷²⁴ Tumenta et al 2013 (78) *MB* 461.

⁷²⁵ Place et al 2011 *IFAW* 18.

⁷²⁶ CBD Art 8; RAMSAR Art 2; African Convention Art VIII(1); Place et al 2011 *IFAW* 18.

⁷²⁷ CBD Art 8; Winterbach et al 2012 (43) *MR* 96.

⁷²⁸ *Ibid.*

⁷²⁹ *Ibid.*

⁷³⁰ CMS Proposal 2014

usually extending across states boundaries, and outside of protected areas.⁷³¹

Secondly, the rising issue of habitat and human-lion interaction is increasing the prevalence of retaliatory killing.⁷³² The unregulated availability of poisons used for retaliatory killing, in the form of pesticides, is worrying as it makes the killing of these animals very easy for communities.⁷³³

Thirdly, states are not uniform in their approach to regulating the trophy hunting industry in their respective jurisdictions.⁷³⁴ This has created fragmented regulation of the industry as a whole, resulting in damaging impacts on lion population demographics throughout their range.⁷³⁵ The sustainable use provisions of the relevant Conventions and Agreements have not been met by range states.⁷³⁶ The unsustainable nature of this hunting is disconcerting. States have different quota requirements, with no international scientific or governing body to regulate these quotas and to ensure transparency.⁷³⁷ The associated illegal activity of capturing wild lions for captive breeding facilitates is unregulated at an international level, and insufficiently monitored at local levels.⁷³⁸

Fourth, the increase in trade of African lions, their parts and derivatives is worrying. Demand is increasing in both traditional African and Chinese medicinal markets.⁷³⁹ Therefore, regulation of trade activities is of the utmost importance to prevent unsustainable use of these animals.⁷⁴⁰ The rise in illegal trade is even more worrying. Unreported and unregulated capturing and trading of lions, their parts and derivatives, will result in unsustainable use of these animals to an uncontrollable level.⁷⁴¹ Realisation of the extent of

⁷³¹ Ibid.

⁷³² Valeix et al 2012 (49) *JAE* 73; Packer & Kissui 2007 *Transactions* 4.

⁷³³ Packer & Kissui 2007 *Transactions* 10.

⁷³⁴ Lindsey et al 2013 (8) *PLoS* 9; Packer et al 2006 *SACW* 8.

⁷³⁵ Ibid.

⁷³⁶ CBD Art 2; SADC Art 4(2)(a).

⁷³⁷ Lindsey et al 2013 (8) *PLoS* 2; Whitman et al 2007 (21) *CB* 593.

⁷³⁸ Funston P "Conservation and management of lion in Southern Africa: status, threats, utilisation and restoration option" in *Management and conservation* 125.

⁷³⁹ Kasiki & Hamunyela 2014 *Animals Committee* 8; CITES 2012 *Database*; Hargreaves 2010 (3) *JWCLAS* 20.

⁷⁴⁰ Ibid.

⁷⁴¹ Kasiki & Hamunyela 2014 *Animals Committee* 14; Bauer et al 2006 *SSC* 25.

these activities could occur too late, when underground markets have already been established.⁷⁴²

Fifth, implementation, compliance and enforcement issues throughout the regime raise some concern. Although the international Conventions provide a broad framework for range states to formulate legislation from, states are still obligated to comply with and enforce the relevant provisions. However, and especially in developing countries, implementation of environmental laws is challenging due to capacity constraints and lack of political will.⁷⁴³

Additionally, some of the Conventions and Agreements that hold important provisions for combating the threats to African lions do not have sufficient enforcement measures to address non-compliance.⁷⁴⁴ The African Convention is one example of this at a regional level.⁷⁴⁵

Lastly, and possibly most importantly, it is evident that African lion populations across Africa are in decline.⁷⁴⁶ If the current regime were effective in conserving and protecting the species then this would not be the case. In finding the international legal regime to be insufficient in these areas, a few recommendations are offered in the next chapter.

⁷⁴² Kasiki & Hamunyela 2014 *Animals Committee* 12.

⁷⁴³ Place et al 2011 *IFAW* 45; Ogada 2014 (1332) *ANYAS* 14; Rose G “Gaps in the Implementation of Environmental Law at the National, Regional and Global Level” 2011 *First Preparatory Meeting of the World Congress on Justice, Governance and Law for Environmental Sustainability* 11.

⁷⁴⁴ Place et al 2011 *IFAW* 48.

⁷⁴⁵ *Ibid.* See Chapter 3 section 1.

⁷⁴⁶ Place et al 2011 *IFAW* 12; Bauer et al 2014 *IUCN*.

CHAPTER 5: CONCLUDING REMARKS

5.1 Recommendations

The recommendations below address the areas of concern mentioned in the previous section.⁷⁴⁷

5.1.1 Lion habitat and prey protection

To promote African lion habitat protection throughout their range it is suggested that the African lion is listed under the CMS.⁷⁴⁸ If listed on Appendix II, the CMS can provide guidelines for Agreements between range states on the needs and requirements of the species.⁷⁴⁹ Range states would need to cover the whole range of the species concerned. This would provide conservation and restoration of important habitat to maintain a favourable conservation status of the species.⁷⁵⁰

These Agreements would also provide for the maintenance of a network of suitable habitats, which will allow corridors of interaction between lion prides and promote gene flow.⁷⁵¹ Cultivation of land and human practices, which degrade African lion habitat, may be limited through these Agreements.⁷⁵² Provision would need to be made for the elimination of, or compensation for, activities and obstacles, which would affect the range, and conservation of the African lion.⁷⁵³ However, there are also some African lion range states that are not yet party to the CMS, such as South Sudan, Zambia, Malawi, Central African Republic, Namibia and Botswana.⁷⁵⁴ This could be problematic in forming a comprehensive Agreement.⁷⁵⁵ Nevertheless, states not yet party to the CMS can still participate in CMS Agreements, but this will need to be at the discretion of those states.⁷⁵⁶

⁷⁴⁷ See Chapter 4 section 3.

⁷⁴⁸ CMS Proposal 2014.

⁷⁴⁹ CMS Art V.

⁷⁵⁰ Ibid Art V(5)(e) & Art IV(2).

⁷⁵¹ Ibid Art V(5)(f); Winterbach et al 2012 (43) *MR* 96.

⁷⁵² CMS Art V(5)(h).

⁷⁵³ Ibid.

⁷⁵⁴ CMS 2014 *List of Parties* <http://www.cms.int/en/parties-range-states> (accessed 06.10.2014).

⁷⁵⁵ Ibid.

⁷⁵⁶ CMS Art VI.

Currently, a CMS Resolution is in place requesting range states to work together to find solutions to the continuous decline of lion populations.⁷⁵⁷ Possible listing under the CMS will be negotiated again at a later date.⁷⁵⁸ One issue that should be discussed between range states is habitat loss and degradation and what mechanisms are needed to assess and prevent this.

In the interim, protected area management and regulation in range states needs to become a priority.⁷⁵⁹ Perhaps a fund could be established for better law enforcement inside these areas.⁷⁶⁰ Outside of protected areas, range states should identify large and intact ecosystems and ensure that they are conserved for African lions and their prey.⁷⁶¹ The importance of habitat conservation should be integrated into national and regional regulations on livestock husbandry and agriculture.⁷⁶² This would reduce existing habitat degradation by human population expansion.⁷⁶³

5.1.2 Retaliatory and traditional killing

The prevalence of retaliatory killing also needs to be tackled as soon as possible. Range states should adopt landscape level strategies that reduce human-wildlife conflict.⁷⁶⁴ These could follow the same design as the Lion Guardian Program in Kenya. Where participation from communities in the protection of African lions is encouraged through incentive based measures that are traditionally valuable and not only monetary.⁷⁶⁵

Range states need to encourage and promote co-existence between communities and lions. This could be through legislation on development, sustainable use and habitat conservation.⁷⁶⁶ As a deterrent to retaliatory killing by poison, the legal framework addressing pesticide regulation and control must be strengthened.⁷⁶⁷ This would ensure that killing of animals in

⁷⁵⁷ CMS Draft Resolution 2014.

⁷⁵⁸ Ibid.

⁷⁵⁹ Creel et al 2013 (16) *EL* 3.

⁷⁶⁰ Ibid.

⁷⁶¹ Ibid.

⁷⁶² Bauer et al 2006 *SSC* 20.

⁷⁶³ Ibid.

⁷⁶⁴ Creel et al 2013 (16) *EL* 3.

⁷⁶⁵ Hazzah et al 2014 (28) *CB* 859.

⁷⁶⁶ Ibid.

⁷⁶⁷ Ogada 2014 (1332) *ANYAS* 14.

this way is seen as illegal.⁷⁶⁸ The international community needs to be made aware of the extent and damage of these activities on lions, as well as other animals, to ensure international support for range states in trying to curb this activity.⁷⁶⁹ Additionally, research on alternative management methods needs to be developed to deal with lions that do kill livestock and people.⁷⁷⁰

5.1.3 Trophy hunting industry

In addressing the issues with the trophy hunting industry, it would be advised that recreational hunting of African lions is reduced by range states, and hunting that does occur should be better regulated.⁷⁷¹ Range states need to have uniform quota levels to ensure that the approach to the industry is equal throughout the range of the species.⁷⁷² This requires the effective implementation of the regional Agreements and Protocols that promote sustainable use. To encourage sustainability, quotas for female lions and sub-adult males should not be permitted.⁷⁷³ Tanzania and Botswana have already banned hunting of female lions and have a 6 year age minimum for males in their hunting concessions.⁷⁷⁴ These conditions should be adopted in all range states to ensure consistency, in line with SADC provisions and IUCN objectives.⁷⁷⁵

As mentioned above The African lion should be listed on Appendix II of the CMS.⁷⁷⁶ Agreements established by range states may reduce trophy hunting. States would be encouraged to include measures to control and manage the legal and illegal hunting, capturing or killing of migratory species.⁷⁷⁷

However, it must be noted that trophy hunting of lions can, in theory, provide conservation for lion habitat and conservation.⁷⁷⁸ Many range states

⁷⁶⁸ Ibid.

⁷⁶⁹ Ibid.

⁷⁷⁰ Ibid.

⁷⁷¹ Creel et al 2013 (16) *EL* 3.

⁷⁷² Packer et al 2006 *SACW* 9.

⁷⁷³ Ibid.

⁷⁷⁴ Ibid.

⁷⁷⁵ SADC Art 6(2)(b); Bauer et al 2006 *SSC* 7; Nowell & Bauer 2006 *SSC* 8.

⁷⁷⁶ CMS Art IV.

⁷⁷⁷ Ibid Art V(5)(j) & Art V(5)(k).

⁷⁷⁸ Packer et al 2006 *SACW* 9.

need this industry to assist them in conservation.⁷⁷⁹ However, income generated from this industry needs to be put back into conservation and protection of African lions.⁷⁸⁰ Lion populations can recover from trophy hunting if the industry is managed sustainably.⁷⁸¹ To enable management decisions that are in the interests of conserving the species, lion monitoring systems should be set up.⁷⁸² African lion research should also increase to enable lion range states to make informed decisions on hunting quotas.⁷⁸³

The hunting of captive-bred animals should be disallowed. It undermines conservation credibility of the legitimate hunting industry and has no purpose other than commercial gain for the captive breeders.⁷⁸⁴ Listing the African lion under the CMS would encourage the inclusion of provisions in Agreements with particular reference to the illegal taking of migratory species.⁷⁸⁵ This could possibly prevent unknown and uncontrolled poaching of wild lions fuelling the captive-bred industry.⁷⁸⁶

As an additional measure, organisations and some states are encouraging the adoption of the Universal Declaration on Animal Welfare in states that have captive-breeding facilities.⁷⁸⁷ It is hoped that this Declaration could pave the way for future legally binding international Agreements on animal welfare.⁷⁸⁸ The principles of the Declaration encourage the welfare of animals to be a common objective of states, and that steps are taken by states to prevent cruelty to animals.⁷⁸⁹ If South Africa were to adopt this Declaration, for example, the captive-bred lion industry, as well as their treatment in canned hunts, may be questioned.⁷⁹⁰

⁷⁷⁹ Ibid.

⁷⁸⁰ Ibid.

⁷⁸¹ Lindsey et al 2013 (8) *PLoS* 9.

⁷⁸² Bauer et al 2006 *SSC* 24.

⁷⁸³ Ibid.

⁷⁸⁴ Packer et al 2006 *SACW* 9.

⁷⁸⁵ CMS Art V(5)(k).

⁷⁸⁶ Panel of Experts 2005 *Report* 21.

⁷⁸⁷ Isacat B *How to Do Animal Rights legally, with confidence* 3rd ed (2014) Lulu Publishers North Carolina 304.

⁷⁸⁸ Ibid.

⁷⁸⁹ Universal Draft Declaration on Animal Welfare 2007 *World Society for the Protection of Animals* http://www.worldanimalprotection.org/Images/Proposed_UDAW_Text%20-%20ENGLISH_tcm24-2544.pdf (accessed 07.10.2014).

⁷⁹⁰ Hargreaves 2010(3) *JWCLAS* 14.

5.1.4 Trade activities

In addressing the increase in trade of African lions, their parts and derivatives, and the issues with the Periodic Review, listing the African lion on CITES Appendix I should be reconsidered.⁷⁹¹ However, due to the fact that many range states are struggling to implement the necessary CITES provisions into national legislation, a CITES up-listing may be ineffective in this regard.⁷⁹² Therefore perhaps a moratorium on trade in African lion bone specifically could be established for a period to allow a thorough analysis of the current trade in, and the market for, lion bone.⁷⁹³ This suggestion may however be opposed by Government officials of range states.⁷⁹⁴ This will certainly be the case in South Africa. The previous Minister of Water and Environmental Affairs already stated that a moratorium on lion bone exports from South Africa will be unnecessary as it is believed that the trade does not threaten wild populations.⁷⁹⁵ However, range state governments should not ignore the staggering rise in lion bone trade, and something needs to be done before the market is fully established.⁷⁹⁶

Conversely, it could become the responsibility of importing developed states to curb the increase in lion trade. This has already begun with some importing states.⁷⁹⁷ Australia, for example, is considering treating trade in African lion specimens as if the species were listed on Appendix I of CITES.⁷⁹⁸ This is due to the concerns over wild population decline as well as the nature of canned hunting.⁷⁹⁹

Ultimately the illegal trade in African lions, their parts and derivatives, will never have specific data, as it is often difficult to monitor the extent of

⁷⁹¹ See Chapter 4 section 2.

⁷⁹² Outcome of the CITES NLP. See Chapter 3 section 5.1; Place et al 2011 *IFAW* 48.

⁷⁹³ Macleod 2012 *Mail & Guardian*.

⁷⁹⁴ Hargreaves 2010 (3) *JWCLAS* 23.

⁷⁹⁵ *Ibid.* See Chapter 2 section 4.

⁷⁹⁶ *Ibid.*

⁷⁹⁷ Director of Wildlife Trade Regulations "Proposal to take stricter domestic measures to regulate the import and export of specimens of African lion" 2014 *Australian Government-Department of Environment* <http://www.environment.gov.au/biodiversity/wildlife-trade/comment/stricter-measures-import-export-african-lion> (accessed 25.11.2014).

⁷⁹⁸ *Ibid.*

⁷⁹⁹ Seymour B "Canned Hunting under fire" 2014 *AU News* <https://au.news.yahoo.com/nsw/a/25194357/canned-hunting-under-fire/> (accessed 25.11.2014).

illegal activities.⁸⁰⁰ However, the increase in demand is apparent, and law enforcement capacity needs to address this increase.⁸⁰¹ Awareness and education on the impact of trade on African lion populations needs to be developed.⁸⁰² For the increase and prevalence of illegal trade in African lion specimens, it is recommended that a specific program be established under the Lusaka Agreement Task Force in order to combat this threat and to take action against those involved.⁸⁰³

5.1.5 Additional recommendations

Issues stemming from compliance and enforcement are difficult to address from a broad international framework. It is the range states' responsibility to understand the threats that African lions are being exposed to. Following this is their responsibility to then implement the relevant provisions from the international and regional framework.⁸⁰⁴ Capacity constraints are often the driving reason why developing states do not effectively provide for provisions laid out in relevant Conventions and Agreements.⁸⁰⁵ Perhaps one can apply the CBD's financial support provision to enable range states to comply with, and implement, the provisions of the CBD for in-situ conservation of African lions.⁸⁰⁶

Additionally, the cost of conservation and protection at a landscape level is high.⁸⁰⁷ Managing unfenced lion populations requires roughly US \$2000 per km² per year.⁸⁰⁸ It is suggested that an international fund, targeted at African lion conservation and protection, be set up to assist range states.⁸⁰⁹ States could then have the opportunity to create effective compliance and enforcement regimes within their domestic legislations.⁸¹⁰

⁸⁰⁰ Nowell & Bauer 2006 SSC 25.

⁸⁰¹ Ibid.

⁸⁰² Ibid.

⁸⁰³ Place et al 2011 *IFAW* 49.

⁸⁰⁴ Rose 2011 *World Congress*.

⁸⁰⁵ Ibid.

⁸⁰⁶ CBD Art 20(2); CBD Art21.

⁸⁰⁷ CMS Proposal 2014 16.

⁸⁰⁸ Ibid.

⁸⁰⁹ International awareness around the status of African lion populations could give way to such a fund. See Ibid.

⁸¹⁰ Ibid.

These could then be in line with the relevant international and regional Instruments.⁸¹¹

What is apparent, is that the security and viability of the African lion is uncertain, and legal protection of the species needs to be clear, to start ensuring their survival in the future. African lions are listed as 'vulnerable' on the IUCN red list.⁸¹² This means that they are not yet critically endangered or endangered, but are facing a high risk of extinction in the wild in the future.⁸¹³ However, it seems that with these growing threats that some legal changes need to be made to ensure greater protection of the African lion at an international level.

5.2 Conclusion

In analysing the effectiveness of the international legal regime in the protection of the African lion, one must not lose sight of the value that the African lion holds as a species.⁸¹⁴ African lions are valuable in many respects. Firstly, for their important role in the balancing of ecosystems, secondly for their intrinsic cultural and traditional value, and thirdly for their economic value for range states.⁸¹⁵ With such importance it is worrying to see that the wild population continues to decline, from 100 000 in the 1990s to an estimate of less than 29 665 today.⁸¹⁶ It has been shown that threats arising from habitat loss, prey scarcity, retaliatory and traditional killing, the trophy hunting industry and trade in lion specimens are all impacting the survival of the species.⁸¹⁷ Any increase in these threats will have a negative impact on the remaining lion populations.⁸¹⁸

It is evident that there needs to be some kind of regulatory framework to try and combat, or overcome, these threats before it is too late to save the species. Therefore, the African lion has been subject to increasing attention

⁸¹¹ Ibid.

⁸¹² Bauer et al 2014 *IUCN*.

⁸¹³ *IUCN Red List*.

⁸¹⁴ See Chapter 1 section 1.

⁸¹⁵ Braun 2012 *NG*.

⁸¹⁶ Hazzah et al 2009 (142) *BioCon* 2428.

⁸¹⁷ Bauer et al 2014 *IUCN*.

⁸¹⁸ Nowell & Bauer 2006 *SSC* 20.

from the global community.⁸¹⁹ Despite an IUCN listing as ‘vulnerable’, there is a growing concern that African lions need more international protection.⁸²⁰ Creating conservation and protection obligations at a global level allows for more uniform action, implementation and enforcement of legislation at regional and local levels.⁸²¹ The current international legal regime for the protection of the African lion does possess some positive provisions that promote conservation, the establishment of protected areas, sustainable use, education and legal and sustainable trade.⁸²² However, lion populations are still decreasing, and so it is believed that this regime is inadequate in addressing the current threats to the species.⁸²³ The issues with the existing international and regional legal regime have been highlighted.⁸²⁴ In addition it is also distressing that the 2006 IUCN strategies for the African lion, mentioned throughout this dissertation, have not been adopted effectively by range states.⁸²⁵ Recommendations have been made to address these issues.⁸²⁶ These recommendations provide a way forward for the international regime to effectively protect such a valuable species.⁸²⁷

Taking action now to address the gaps in the existing international, and regional, legal regime for the protection of the African lion will ensure that the species does not decline to a status of ‘endangered’ or worse.⁸²⁸ The international community as well as the range states need to make the recommended changes now. If we wait too long to effectively protect and conserve these lions, it may be too late to save the species.⁸²⁹

⁸¹⁹ Bauer et al 2014 *IUCN*.

⁸²⁰ Place et al 2011 *IFAW* 6.

⁸²¹ Sands & Peel *Principles* 512.

⁸²² See Chapter 4 section 1.

⁸²³ Place et al 2011 *IFAW* 12; Bauer et al 2014 *IUCN*.

⁸²⁴ See Chapter 4 section 2.

⁸²⁵ CMS Proposal 2014 16.

⁸²⁶ See Chapter 5 section 1.

⁸²⁷ *Ibid*.

⁸²⁸ Place et al 2011 *IFAW* 6.

⁸²⁹ Hazzah et al 2009 (142) *BioCon* 2428.

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