

Protection of the African Lion: A Critical Analysis of the Current International Legal Regime

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Date published 26 April 2016

Editor Prof AA du Plessis

How to cite this article

Watts S "Protection of the African Lion: A critical Analysis of the Current International Legal Regime" *PER / PELJ* 2016(19) - DOI <http://dx.doi.org/10.17159/1727-3781/2016/v19i0a1158>

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DOI

<http://dx.doi.org/10.17159/1727-3781/2016/v19i0a1101>

Abstract

This article looks at the current international regime that pertains to the African lion, a species that needs adequate protection across its range (a range that does not adhere to state boundaries). This analysis comes at a time when threats such as habitat and prey loss, retaliatory killing, trophy hunting and trade, are all impacting the remaining populations of African lions. The species 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, while some believe there to be as little as 15 000 left. This decline is mainly due to the threats noted above.

African lions are currently 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.

Therefore this article looks at each threat to African lion populations in detail and then assesses the international legal regime pertaining to each of these threats, and whether that regime is adequate. The *Convention on Biological Diversity*, *Convention on the Conservation of Migratory Species*, *Convention on International Trade in Endangered Species of Wild Fauna and Flora* and the *Convention on Wetlands of International Importance* are but some of the international instruments that are analysed. This article outlines the arguments that the international legal framework is not acceptable for the protection of the species, and addresses both the positive and negative aspects of this regime.

It is found that the international legal regime for the African lion is in fact not effective in achieving the protection and survival of the species. Some changes are recommended, and the best way forward through an international legal lens is outlined. 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. With the increase in threats to the species and African lions already regionally endangered in some parts of Africa, it is obvious that some legal changes need to be made to ensure greater protection of the African lion at an international level.

Keywords

African lion; international environmental law; conservation; hunting; trade; habitat loss; endangered; conventions; agreements.

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1 Introduction*

The International Union for the Conservation of Nature (IUCN) listed the African lion (*Panthera leo*) as "vulnerable" in 1996 following a declining population trend.¹ Despite this listing, there has been a growing concern that African lions need more international law protection.² This is due to increasing threats to the species that extend across state boundaries.³ Although domestic legislation occurs in some range states,⁴ for a species such as the African lion whose population dynamics extend across national boundaries, international law is of particular importance.⁵ Creating conservation obligations at a global level allows for more uniform action, implementation and enforcement of legislation at local levels.⁶ Therefore it is important to ascertain whether there is an international legal regime pertaining to the protection and conservation of the African lion, and whether that regime is adequate to be implemented locally.

This article sheds light on the reality that the current international legal regime for the African lion is inadequate. To fully address the complexities of this statement, one must understand some subsidiary context and background. African lions are valuable in many respects: first, they are valuable for their important role in the balancing of ecosystems in the wild, secondly for their intrinsic cultural and traditional value, and thirdly for their economic value for range states⁷, through tourist revenue.⁸ Even with such

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¹ IUCN 2014 http://www.iucnredlist.org/static/categories_criteria_2_3; Bauer, Nowell and Packer 2014 <http://www.iucnredlist.org/details/15951/0>.

² Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 6.

³ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 6.

⁴ States that have differing strengths of domestic legislation include Angola, Kenya, Cameroon, Congo, Gabon, Ghana, Guinea, Malawi, Mali, Namibia, Niger, Nigeria, Rwanda, Botswana, South Africa, Tanzania, Zambia, Zimbabwe. See Kasiki and Hamunyela "Panthera Leo - Report" 14.

⁵ Kasiki and Hamunyela "Panthera Leo - Report" 14; IUCN 2014 <http://maps.iucnredlist.org/map.html?id=15951>.

⁶ Sands and Peel *Principles* 512.

⁷ In this context a "range state" means any country that exercises jurisdiction over any part of the range of African lions. See *Convention on the Conservation of Migratory Species of Wild Animals* (1980) 19 ILM 15 (CMS).

⁸ Braun 2012 <http://newswatch.nationalgeographic.com/2012/12/06/lion-numbers-plunge-as-african-wilderness-succumbs-to-human-pressure/>; Nowell and Bauer *Regional Lion Conservation Strategy* 7.

importance the African lion is exposed to threats such as habitat and prey loss, retaliatory killing, trophy hunting and trade. The concern over these threats first arose in 2004 when the Kenyan Government proposed increased trade protection for African lions at a *Convention of International Trade In Endangered Species (CITES)*⁹ CoP.¹⁰ This created awareness around the status of African lion populations, and organisations started to question and demand increased protection for the species.¹¹

Further research ascertains whether the current international legal regime includes measures that provide for the protection of the African lion, and if so, whether these measures are effective against the mentioned threats. The best way forward for the species survival is then recommended, through an international legal lens.

1.1 The current state of African lion populations

There is great difficulty in conducting lion population censuses, and there is great divergence in lion population estimates.¹² However, it is widely agreed that there is a downward trend in African lion populations.¹³ Population estimates dropped from a million in pre-colonial times to less than 100 000 in the 1990s.¹⁴

Today, the IUCN estimates that there are fewer than 29 665 free-ranging African lions.¹⁵ Disturbingly, the African lion population in West Africa is listed as regionally endangered by the IUCN, with an estimated number of 850 mature individuals remaining in the wild.¹⁶ For African lions to have a

⁹ *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (1973) 12 ILM 1085 (CITES).

¹⁰ CITES 2004 http://www.cites.org/common/cop/13/raw_props/KE-Lion.pdf.

¹¹ Roberts 2004 <https://awionline.org/content/will-cites-ignore-its-responsibility-contribute-african-lion-conservation>.

¹² This is due to the difficulty of identification, requiring high-resolution cameras and an unobstructed view. See Braun 2012 <http://newswatch.national-geographic.com/2012/12/06/lion-numbers-plunge-as-african-wilderness-succumbs-to-human-pressure/>; Bauer and Van Der Merwe 2004 *OJJC* 26.

¹³ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 12.

¹⁴ Hazzah, Mulder and Frank 2009 *BioCon* 2428; Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 12.

¹⁵ Estimation of 29665 free-ranging lions in Africa. See Hazzah, Mulder and Frank 2009 *BioCon* 2428.

¹⁶ There are genetic differences between lions in East and Southern Africa, and those in West and Central Africa. For the purpose of this article this distinction is not critical, as the lions in both areas are threatened. See Riggio *et al* 2013 *BioCon* 18; Bauer, Nowell and Packer 2014 <http://www.iucnredlist.org/details/15951/0>.

high survival rate in the future, there need to be multiple, genetically diverse, populations connecting across ecosystems within Africa.¹⁷

2 Threats to the African lion's existence

2.1 *Habitat loss and prey scarcity*

2.1.1 *African lion habitat loss*

Historically, African lions occurred in almost all African habitats, but they are now found only in savannah habitats across Sub-Saharan Africa.¹⁸ This area is 13.5 million km², but only 3.4 million km² is suitable to support African lions, with just 1.08 million km² classified as protected by the IUCN.¹⁹ The density of lion populations decreases with increasing distance from conservation areas. Therefore African lions are dependent on protected areas.²⁰

Activities that have altered lion habitat are mostly agriculture, livestock grazing and human development.²¹ The human population of Sub-Saharan Africa is predicted to increase to 1.75 billion people by 2050.²² To support this growth, land and resources are under increasing pressure.²³ Due to the loss of habitat, connections for lions between various parks and conservancies no longer exist.²⁴ This creates difficulty for gene transfer between African lion prides.²⁵ They have had to expand their home range due to this loss of habitat.²⁶ This expansion allows for more contact with domestic animals, spreading disease between livestock and lions, resulting

¹⁷ Lions in West Africa have been separated from other lion populations due to habitat destruction. This has been one of the factors leading to the population decrease. Riggio *et al* 2013 *BioCon* 18; Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 14; Bauer, Nowell and Packer 2014 <http://www.iucnredlist.org/details/15951/0>.

¹⁸ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 10; Kasiki and Hamunyela "Panthera Leo - Report" 4.

¹⁹ Riggio *et al* 2013 *BioCon* 18, 29.

²⁰ Winterbach *et al* 2012 *MR* 92.

²¹ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 18.

²² Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 18; World Bank Group 2014 <http://data.worldbank.org/region/sub-saharan-africa>.

²³ Nowell and Jackson *Status Survey* 149.

²⁴ Winterbach *et al* 2012 *MR* 96.

²⁵ Tende *et al* 2014 *PLoS ONE* 6.

²⁶ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 18.

in increased lion mortality.²⁷ Desertification further exacerbates this link with human populations.²⁸ It is predicted that by 2025 land degradation through desertification will lead to a loss of two-thirds of all arable land in Africa.²⁹ This loss will invariably increase competition between people and lions for land, resulting in less land for lion populations.³⁰

2.1.2 African lion prey scarcity

A healthy lion population within an ecosystem is limited by prey abundance.³¹ Decline in prey relates to the same habitat degradation mentioned above.³² Linked with this is the proximity of wild ungulates to domestic livestock increasing disease transmission to wild populations.³³ This prey scarcity is also due to an increase in wild game hunting.³⁴ The commercialisation and illegal trade of bushmeat is also having an impact on wild ungulate populations.³⁵ Therefore, prey is becoming less abundant for lion populations, resulting in their starvation and death, as well as their need to search for food closer to human populated areas.³⁶

2.2 Retaliatory and traditional killing

African lions previously followed seasonal herbivore migrations. However, due to livestock abundance near to and often within lions' expanding home ranges, lions are no longer following these migrations.³⁷ Thus, African lions pose a great threat to local livelihoods through livestock predation as well as attacks on people.³⁸ Both of these issues result in the retaliatory killing

²⁷ Winterbach *et al* 2012 MR 101.

²⁸ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 19.

²⁹ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 21.

³⁰ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 21.

³¹ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 19.

³² Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 18.

³³ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 19.

³⁴ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 19.

³⁵ Lindsey *et al* *Illegal Hunting* 5.

³⁶ Valeix *et al* 2012 JAE 77.

³⁷ Valeix *et al* 2012 JAE 77.

³⁸ Packer and Kissui 2007 TNAWNRC 4; Valeix *et al* 2012 JAE 73; Bauer 2003 http://www.carnivoreconservation.org/files/thesis/bauer_2003_phd.pdf 61.

of lions through poisoning, trapping and shooting, causing further lion population decline.³⁹

The killing of lions is also ceremonial.⁴⁰ Traditional Sukuma men in Tanzania become prestigious local figures if they kill a lion for retaliatory purposes.⁴¹ Recently, however, Sukuma men have found themselves having to travel far distances in search of lions to kill.⁴²

2.3 The trophy hunting industry

2.3.1 The hunting of wild lions

Trophy hunting⁴³ is often used as an economic incentive for local communities to support wildlife conservation.⁴⁴ However, this industry often provides only short-term gains, and as profits increase so do the risks of the overexploitation of lions.⁴⁵ This industry lacks the structure and transparency to ensure the sustainability of African lion populations. Often, hunting concessions are divided randomly amongst hunting associations and quotas are increased with no scientific support.⁴⁶ It has been estimated that unsustainable trophy hunting has reduced the wild African lion population by thirty per cent.⁴⁷

Trophy hunting gives rise to further threats to African lion populations through the dominant selection of large male targets, often pride holders in the wild.⁴⁸ Once these leaders are killed, other males kill the deceased male's offspring, resulting in unnecessary population decline.⁴⁹ Lionesses defending their cubs are at times killed as well.⁵⁰ Furthermore, the hunting of female African lions results in dramatic population decline.⁵¹ It has been

³⁹ Nowell and Bauer *Regional Lion Conservation Strategy* 21.

⁴⁰ Fitzherbert *et al* 2014 *BioCon* 84.

⁴¹ Fitzherbert *et al* 2014 *BioCon* 84.

⁴² Fitzherbert *et al* 2014 *BioCon* 85.

⁴³ Trophy hunting entails killing an animal and stuffing the carcass to display the animal as a trophy. See Hargreaves 2010 *JWCLAS* 8.

⁴⁴ Whitman *et al* 2007 *CB* 592.

⁴⁵ Whitman *et al* 2007 *CB* 593.

⁴⁶ Whitman *et al* 2007 *CB* 593.

⁴⁷ Kiffner 2008 *ESU* 2.

⁴⁸ Kiffner 2008 *ESU* 2.

⁴⁹ That these threats are very real was demonstrated by the recent killing a lion in Zimbabwe. See Parry 2015 <http://www.dailymail.co.uk/news/article-3190750/One-Cecil-lion-s-cubs-killed-rival-male-sparking-fears-remaining-seven-just-days-left-live-beast-slaughtered-dentist.html>.

⁵⁰ Kasiki and Hamunyela "Panthera Leo - Report" 14; Kiffner 2008 *ESU* 2.

⁵¹ Loveridge, Packer and Dutton "Recreational Hunting of Lions" 114.

found that killing less than three per cent of reproductive females will expose lion populations to overall decline.⁵²

2.3.2 *The hunting of captive-bred lions*

The captive-bred lion industry has grown significantly in Africa.⁵³ It involves breeding lions in captivity to be hunted in fenced areas.⁵⁴ Due to an increase in captive-bred lion hunting, the demand for wild lion hunts may decrease, thereby reducing conservation incentives for wild lions.⁵⁵ In terms of genetic threats, breeders do not keep records of breeding lines and so their lions cannot be incorporated into conservation programmes for wild lion populations.⁵⁶ Another growing threat is the poaching of adult wild lions and cubs to add to these breeding facilities.⁵⁷ Exact numbers reflecting the rate at which this occurs are unknown, and the practice is uncontrolled, thus posing an even greater risk to the species.⁵⁸

2.4 *Trade in African lions, their parts and derivatives*

2.4.1 *Legal trade activities*

African lions, their parts and derivatives are traded at both local and international level.⁵⁹ There is trade in African lion teeth, claws, skin, skulls, whiskers, fat, bones, bile, testicles, heart and tails, and also in live lions.⁶⁰ In 2012 there were 557 reported exports of African lions, their parts and derivatives, from African countries.⁶¹ The quantity of each export differs. For example, just one of these exports contained 452 trophies exported from South Africa to the United States of America.⁶² Inconsistencies in export data suggest that captive-bred lions are being exported from South Africa to other African states to be hunted as "wild" lions.⁶³ This creates the

⁵² Loveridge, Packer and Dutton "Recreational Hunting of Lions" 115.

⁵³ Lindsey *et al* 2012 *SAJWR* 18.

⁵⁴ Lindsey *et al* 2012 *SAJWR* 12.

⁵⁵ Lindsey *et al* 2012 *SAJWR* 12.

⁵⁶ Anon 2005 http://www.huntingreport.com/images2/pdf/Final_Draft_Panel_of_Expert_Report_to_DEAT.pdf 23.

⁵⁷ Anon 2005 http://www.huntingreport.com/images2/pdf/Final_Draft_Panel_of_Expert_Report_to_DEAT.pdf 23.

⁵⁸ Anon 2005 http://www.huntingreport.com/images2/pdf/Final_Draft_Panel_of_Expert_Report_to_DEAT.pdf 21.

⁵⁹ Kasiki and Hamunyela "Panthera Leo - Report" 8.

⁶⁰ Kasiki and Hamunyela "Panthera Leo - Report" 8.

⁶¹ CITES 2012 <http://bit.ly/1RXSRL5>.

⁶² CITES 2012 <http://bit.ly/1RXSRL5>.

⁶³ Hargreaves 2010 *JWCLAS* 18.

impression that wild lion populations are thriving, which is far from the reality.⁶⁴

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", which is believed to have healing and medicinal properties.⁶⁵ In 2008 there were 70 international exports of lion bone, but in 2010 this number increased to 638 exports.⁶⁶ Captive-bred lions are one source of these bones.⁶⁷ There is a clear possibility that the international trade in lion parts and derivatives for traditional Chinese medicine may grow uncontrollably, affecting populations, as we have seen in the case of the tiger.⁶⁸

2.4.2 *Illegal trade activities*

Live lions, their parts and derivatives are also traded illegally, domestically and internationally.⁶⁹ The unlawful nature of this trade makes it difficult to quantify the extent of such activities.⁷⁰ Control of this trade is problematic. Often the legal trade in lion trophies is used as a guise for selling other lion products on the black market.⁷¹ Weak law enforcement and capacity, as well as insufficient knowledge in many African states further allows illegal trade to threaten remaining lion populations.⁷²

As stated above, the captive-bred lion industry is fuelling the demand for lion bone.⁷³ However, due to the fixed and expensive prices of captive-bred lions, the poaching of wild lions may increase.⁷⁴ A further stimulant for poaching lions may arise from the market preference in the East for wild animal parts rather than captive-bred counterparts.⁷⁵

⁶⁴ Hargreaves 2010 *JWCLAS* 20.

⁶⁵ Parker 2012 <http://mg.co.za/article/2012-07-04-sa-breeders-embrace-growing-asian-demand-for-lion-bones>.

⁶⁶ Kasiki and Hamunyela "Panthera Leo - Report" 18.

⁶⁷ Hargreaves 2010 *JWCLAS* 20.

⁶⁸ Kasiki and Hamunyela "Panthera Leo - Report" 14.

⁶⁹ Kasiki and Hamunyela "Panthera Leo - Report" 12.

⁷⁰ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 25.

⁷¹ Kasiki and Hamunyela "Panthera Leo - Report" 12.

⁷² Nowell and Bauer *Regional Lion Conservation Strategy* 25.

⁷³ Hargreaves 2010 *JWCLAS* 21.

⁷⁴ Hargreaves 2010 *JWCLAS* 21.

⁷⁵ Lindsey *et al* 2012 *SAJWR* 21.

3 The legal regime

An increase in habitat loss, prey depletion, retaliatory killing, unmonitored hunting activities and trade threats will have a negative impact on remaining lion populations.⁷⁶ It is evident that there needs to a regulatory framework to combat or overcome these threats.

3.1 *The legal regime applicable to threats from habitat loss and prey scarcity*

3.1.1 *Conventions applicable to habitat loss*

The conservation and management of African lions and lion habitat are central objectives of the IUCN African lion conservation strategies, which were formulated in 2006.⁷⁷ The development of legal and institutional frameworks that provide for wildlife-integrated land-use and lion conservation are important objectives of these strategies.⁷⁸ 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.⁷⁹

The *Convention on Biological Diversity* (CBD)⁸⁰ is relevant to habitat loss as it provides indirect protection through the establishment of protected areas,⁸¹ which are regarded as important tools for maintaining lion habitat integrity and restoration.⁸² All African lion range states are party to the CBD and should establish a system of protected areas with guidelines to manage these areas.⁸³ In 2010 the CBD CoP revised its "Strategic Plan for Biodiversity",⁸⁴ where target 11 calls for 17 per cent of the global terrestrial land surface to be protected by 2020.⁸⁵

⁷⁶ Hazzah, Mulder and Frank 2009 *BioCon* 2428.

⁷⁷ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 7; Nowell and Bauer *Regional Lion Conservation Strategy* 8.

⁷⁸ Nowell and Bauer *Regional Lion Conservation Strategy* 38-41.

⁷⁹ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 21.

⁸⁰ *Convention on Biological Diversity* (1992) 31 ILM 818 (CBD).

⁸¹ CBD Arts 8(a) and (b).

⁸² Matz 2005 *HJIL* 202; Geldmann *et al* 2013 *BioCon* 230.

⁸³ CBD 2014 <http://www.cbd.int/information/parties.shtml>; CBD Arts 8(a) and (b).

⁸⁴ These Aichi Biodiversity Targets are a move towards a more ecosystem-based approach to regulation and management of the environment. They promote conservation and the sustainable use of resources. See Sands and Peel *Principles* 443, 462.

⁸⁵ Geldmann *et al* 2013 *BioCon* 236.

Through the CBD, and in line with the promoted IUCN mechanisms, states are directed to manage biological resources outside of protected areas.⁸⁶ To assist states in conservation and sustainable development, the CBD provides Technical Series that provide detail on how best to protect the biodiversity of different habitats.⁸⁷

The *Convention on the Conservation of Migratory Species of Wild Animals* (CMS)⁸⁸ attempts to fill the gaps of this broader framework by providing a species-specific approach to conservation.⁸⁹ The African lion is not yet listed under the CMS. A listing would provide increased international awareness around the state of African lion populations, with range states committing to increased protection of lions in their jurisdictions, as well as cohesion in conservation actions with neighbouring states.⁹⁰ Due to their rate of decline, there has been a Proposal by the Kenyan Government to list the African lion on Appendix II of the CMS.⁹¹ At the CoP11 in November 2014 the Proposal was set aside and a Resolution was adopted instead.⁹² The Resolution requests range states to consult with one another over the population status of the African lion.⁹³ The Resolution also recommends that range states develop regional conservation action plans designed to reverse lion population decline.⁹⁴ Range states are then requested to present a review of progress at the 44th and 45th Standing Committee Meetings in 2015.⁹⁵ There is the possibility of re-submission of the Proposal to include the lion in CMS Appendix II at CoP12 in 2017.⁹⁶ In the interim, the fundamental principles of the CMS still apply.⁹⁷ These principles include

⁸⁶ CBD Art 8(c).

⁸⁷ Technical Series No 44 and No 71 are important for lion range states. See Ervin *et al* *Making Protected Areas Relevant*, CBD Secretariat, UNCCD and Oslo Consortium *Valuing the Biodiversity*.

⁸⁸ *Convention on the Conservation of Migratory Species of Wild Animals* (1980) 19 ILM 15 (CMS).

⁸⁹ Matz 2005 *HJIL* 205.

⁹⁰ Without a CMS listing African lion populations have less protection from a transboundary/international perspective, as well as less international awareness.

⁹¹ *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.

⁹² Lenarz 2014 <http://www.cms.int/en/news/global-protection-proposed-sharks-rays-sawfish-polar-bear-and-lions>; *CMS Draft Resolution: Conservation and Management of the African Lion, Panthera Leo* (2014) UNEP/CMS/COP11/CRP4 (*CMS Draft Resolution 2014*).

⁹³ *CMS Draft Resolution 2014*.

⁹⁴ *CMS Draft Resolution 2014*.

⁹⁵ *CMS Draft Resolution 2014*. The Standing Committee is responsible for carrying out interim activities on behalf of the CoP. See CMS 2014 <http://www.cms.int/en/meetings/standing-committee>.

⁹⁶ *CMS Draft Resolution 2014*.

⁹⁷ CMS Art II.

acknowledgement of the importance of migratory species, paying special attention to their conservation status.⁹⁸

The WHC⁹⁹ 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 World Heritage Sites (WHS) formed under the WHC.¹⁰⁰ There are 40 World Heritage Natural Sites that coincide with the range of African lion populations.¹⁰¹ The *Convention on Wetlands of International Importance* (RAMSAR)¹⁰² may also provide indirect conservation of African lion habitat. African lions and their prey are reliant on wetlands for habitat and water.¹⁰³ Burkina Faso and Zambia both have three listed wetlands, and Namibia, Benin, Cameroon, Congo, and Tanzania each have one listed wetland that supports African lions.¹⁰⁴ The *Convention to Combat Desertification* (UNCCD)¹⁰⁵ could play a role in addressing the problem of drought and desertification.¹⁰⁶ The management of African land and biodiversity could conserve the savannah habitat, which is important to African lions.¹⁰⁷

Education is a necessity to help growing communities understand their impact on their land.¹⁰⁸ The CBD encourages states to promote understanding and the importance of conserving biodiversity by including these in educational programmes.¹⁰⁹ The WHC encourages states to endeavour to strengthen their people's appreciation and respect of natural heritage, through educational programmes.¹¹⁰ Education and public awareness are also promoted through the UNCCD to encourage individuals to undertake activities in a sustainable way.¹¹¹

⁹⁸ CMS Art II(1).

⁹⁹ *Convention Concerning the Protection of the World Cultural and Natural Heritage* (1972) 11 ILM 1358 (WHC).

¹⁰⁰ WHC.

¹⁰¹ WHC 2014 <http://whc.unesco.org/en/list/156>.

¹⁰² *Convention on Wetlands of International Importance especially as Waterfowl Habitat* (1972) 11 ILM 963 (RAMSAR).

¹⁰³ Kabii "Overview of African Wetlands".

¹⁰⁴ Ramsar Convention 2014 <http://www.ramsar.org/country-profiles>.

¹⁰⁵ *United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa* (1994) 33 ILM 1328 (UNCCD).

¹⁰⁶ UNCCD.

¹⁰⁷ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 19.

¹⁰⁸ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 19.

¹⁰⁹ CBD Art 13(a).

¹¹⁰ WHC Art 27(1).

¹¹¹ UNCCD Art 19.

From a regional perspective there is slightly more targeted conservation of African lions and their habitat, especially with regards to the *African Convention on the Conservation of Nature and Natural Resources (African Convention)*.¹¹² The *African Convention* calls on states to recognise that the African lion and their habitat need special protection.¹¹³ In reaching some of the IUCN objectives, the states party to the *African Convention* are required to establish areas to ensure the conservation of Annex listed species such as the African lion.¹¹⁴

The *Southern African Development Community Protocol on Wildlife Conservation and Law Enforcement (SADCP)*¹¹⁵ has a broader approach, where states have a general obligation to protect wildlife habitats to ensure that wildlife populations remain viable.¹¹⁶ However, it adds to the educational provisions of the international Conventions, as states party to the SADCP are required to develop programmes and mechanisms to educate the public and raise awareness over issues concerning the conservation of wildlife.¹¹⁷

3.1.2 Conventions applicable to lion prey scarcity

All the above Conventions for habitat protection are applicable to ungulate species protection too. The effective conservation and management of lions' prey is also an objective of the IUCN strategies.¹¹⁸ Specific measures for the management of hunting ungulates are promoted to monitor prey populations.¹¹⁹ The inclusion of communities in the development of wildlife management regulations is also promoted.¹²⁰ The threat to ungulate species from the bushmeat trade was first recognised by CITES in 2000 with the creation of the CITES Bushmeat Working Group at CoP11.¹²¹ Then, in 2011 a CBD bushmeat liaison group established recommendations for

¹¹² *African Convention on the Conservation of Nature and Natural Resources* (1968) 101 UNTS 3 (*African Convention*).

¹¹³ *African Convention* Art VIII(1).

¹¹⁴ *African Convention* Art X(1)(b).

¹¹⁵ *Southern African Development Community Protocol on Wildlife Conservation and Law Enforcement* (2003) (SADCP).

¹¹⁶ SADCP Art 7(3).

¹¹⁷ SADCP Art 7(7).

¹¹⁸ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 7; Nowell and Bauer *Regional Lion Conservation Strategy* 8.

¹¹⁹ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 22.

¹²⁰ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 22.

¹²¹ CITES Secretariat "CITES and Bushmeat" 9.

addressing the bushmeat trade, in collaboration with the CITES Working Group.¹²²

Regionally, the SADC highlights prey scarcity through principles of cooperation to develop approaches for the conservation and sustainable use of wildlife.¹²³ The Protocol goes further and sets up a Wildlife Sector Technical Committee, which is important for the promotion of sustainable use.¹²⁴

3.2 The legal regime applicable to threats from retaliatory and traditional killing

The IUCN conservation strategies recognise the need for sustainable lion-human cohabitation.¹²⁵ Recommendations are made for the equitable sharing of income derived from wildlife conservation.¹²⁶ To reduce human-lion conflict it is suggested that livestock monitoring systems are established and support groups are formulated to educate local communities on the status of lion populations.¹²⁷

3.2.1 Conventions 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.¹²⁸ The CBD, for example, encourages the development of regulatory provisions that are necessary for the protection of threatened species at a national level.¹²⁹ In addition, CBD protected areas keep wildlife away from humans.¹³⁰ The use of poison to kill lions that disturb people is a growing threat.¹³¹ The *Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention)*¹³² could address this issue, as

¹²² Lindsey *et al Illegal Hunting* 13.

¹²³ SADC Art 3(2).

¹²⁴ SADC Arts 4(1) and 5(7).

¹²⁵ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 7.

¹²⁶ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 7.

¹²⁷ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 23-24; Nowell and Bauer *Regional Lion Conservation Strategy* 36.

¹²⁸ Packer and Kissui 2007 *TNAWNRC* 4.

¹²⁹ CBD Art 8(k).

¹³⁰ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 19.

¹³¹ Packer and Kissui 2007 *TNAWNRC* 10.

¹³² *Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade* (1999) 38 ILM 1 (Rotterdam).

it is aimed at assisting developing nations regarding the import of hazardous substances.¹³³

It is appropriate to delve into regional instruments addressing this threat, as they contain provisions that are more specific to the local context. At a regional level the *African Convention* adds that states should adopt adequate legislation on hunting and the capture of fauna.¹³⁴ This includes legislation prohibiting unauthorised methods of hunting such as the use of drugs or poisons.¹³⁵

As promoted by the IUCN Strategies, incentive-based measures are to be utilised to prevent communities from killing lions for retaliatory and ceremonial reasons.¹³⁶ Economic or other incentives to curb lion killing are to be established.¹³⁷ The CBD encourages states to implement incentive measures for the conservation and sustainable use of biological diversity.¹³⁸ The SADC also requires states to promote incentives in wildlife management and conservation programmes.¹³⁹

In addition, education on the plight of the African lion is also important, as is emphasised by the IUCN strategies.¹⁴⁰ As stated above, education about the conservation of wildlife is addressed in the CBD, WHC and SADC.¹⁴¹ To engage communities in the conservation of the African lion, the Lion Guardians programme was established in 2007 in collaboration with the Kenyan Wildlife Service.¹⁴² The programme aims to reduce the retaliatory and traditional killing of African lions.¹⁴³ Young Maasai warriors are employed as Lion Guardians.¹⁴⁴ Their duty is to protect lions in Amboseli in Kenya, and in Taragire and Ruaha in Tanzania.¹⁴⁵

¹³³ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 47.

¹³⁴ *African Convention* Art VII.

¹³⁵ The use of poison in poison weapons and poison bait is prohibited. See *African Convention* Art VIII(2)(c)(2).

¹³⁶ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 23.

¹³⁷ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 23.

¹³⁸ CBD Art 11.

¹³⁹ SADC Art 7(6).

¹⁴⁰ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 23-24; Nowell and Bauer *Regional Lion Conservation Strategy* 36.

¹⁴¹ CBD Art 13(a); SADC Art 7(7)(a); WHC Art 27.

¹⁴² KWS 2014 <http://www.kws.org/about/index.html>; Lion Guardians 2014 <http://lionguardians.org/our-tools>.

¹⁴³ Lion Guardians 2014 <http://lionguardians.org/our-tools>.

¹⁴⁴ Hazzah *et al* 2014 *CB* 852.

¹⁴⁵ Hazzah *et al* 2014 *CB* 852.

3.3 The legal regime applicable to threats from the trophy hunting industry

The IUCN strategy for East and Southern Africa includes a target of sustainable trophy hunting.¹⁴⁶ To achieve this it promotes the implementation of best management practices in all trophy hunting areas.¹⁴⁷ The IUCN strategy for West and Central Africa proposes lion population monitoring and further research on lions.¹⁴⁸

3.3.1 Conventions applicable to the hunting of wild lions

In using the African lion for commercial means, states should adhere to the sustainable use provisions of the CBD.¹⁴⁹ Under the CBD, states have the obligation to exchange information that is relevant to the conservation and sustainable use of biodiversity.¹⁵⁰

At a regional level, states party to the SADC are required to promote the sustainable use of wildlife.¹⁵¹ The SADC also calls on states to endeavour to harmonise their legal instruments governing hunting, conservation and the sustainable use of wildlife resources.¹⁵² The lack of regulation associated with the industry conflicts with the SADC, in terms whereof states are required to take measures to ensure the conservation and sustainable use of wildlife with restrictions on the number, sex, size and age of specimens to be taken.¹⁵³ The *African Convention* adds more guidance for States on hunting stipulations at a regional level.¹⁵⁴ This Convention allows the hunting, killing, capture and collection of lions if a relevant national authority grants authorisation.¹⁵⁵ States are also required to adopt legislation on the regulation of issuing permits as well as to prohibit unauthorised hunting methods.¹⁵⁶

¹⁴⁶ Nowell and Bauer *Regional Lion Conservation Strategy* 28.

¹⁴⁷ Nowell and Bauer *Regional Lion Conservation Strategy* 28.

¹⁴⁸ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 37.

¹⁴⁹ CBD Art 2.

¹⁵⁰ CBD Art 17.

¹⁵¹ SADC Art 4(2)(a).

¹⁵² SADC Art 6(2)(b).

¹⁵³ Lindsey *et al* 2013 *PLoS ONE* 2; SADC Art 7(3)(c).

¹⁵⁴ Lindsey *et al* 2013 *PLoS ONE* 2.

¹⁵⁵ *African Convention* Art VIII(1)(b); Sands and Peel *Principles* 481.

¹⁵⁶ *African Convention* Arts VII(2)(a) and (b).

3.3.2 Conventions applicable to the hunting of captive-bred lions

Captive-breeding facilities are created and regulated at the discretion of individual states.¹⁵⁷ However, some provisions from the international framework could apply. For example, provisions pertaining to the poaching of wild African lions for this industry would be applicable.¹⁵⁸ These provisions coincide with those mentioned above on the regulation of wild hunting and protected areas. In addition, provisions from the CBD preamble relate to the genetic threat associated with this industry.¹⁵⁹ Allowing hunting practices that provide contact between captive-bred lions¹⁶⁰ and wild lions disregards the genetic value that the CBD emphasises.¹⁶¹

At a regional level the *African Convention* prohibits the capturing of wildlife from protected areas.¹⁶² However, the *African Convention* allows the capture of lions outside of protected areas with the permission of a national authority.¹⁶³ Some lions that are raised in captive breeding facilities are flown to wild areas in other parts of Africa, then drugged and killed by trophy hunters.¹⁶⁴ This practice violates the provision of the *African Convention* that encourages states to adopt legislation on hunting, under which the use of drugs is prohibited.¹⁶⁵

3.4 The legal regime applicable to threats from trade

Lions, their parts and derivatives are traded legally and illegally at both local and international levels.¹⁶⁶ 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.¹⁶⁷ The IUCN strategy for West and Central Africa encourages the control of trade in lion parts and products.¹⁶⁸

¹⁵⁷ Hargreaves 2010 *JWCLAS* 8.

¹⁵⁸ Anon 2005 http://www.huntingreport.com/images2/pdf/Final_Draft_Panel_of_Expert_Report_to_DEAT.pdf 21.

¹⁵⁹ Lindsey *et al* 2012 *SAJWR* 19.

¹⁶⁰ Captive-bred lions are subject to genetic manipulation. See Lindsey *et al* 2012 *SAJWR* 19.

¹⁶¹ CBD preamble; Lindsey *et al* 2012 *SAJWR* 19.

¹⁶² *African Convention* Art III(d).

¹⁶³ *African Convention* Art VIII(1)(b).

¹⁶⁴ Hargreaves 2010 *JWCLAS* 17.

¹⁶⁵ *African Convention* Art VII(2)(c)(2).

¹⁶⁶ Kasiki and Hamunyela "Panthera Leo - Report" 8.

¹⁶⁷ Nowell and Bauer *Regional Lion Conservation Strategy* 28.

¹⁶⁸ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 37.

3.4.1 *The conventions applicable to both legal and illegal trade activities*

The African lion, its parts and derivatives, are used for recreational purposes and commercial purposes, both of which involve international trade.¹⁶⁹ Thus, the African lion is listed on Appendix II of CITES.¹⁷⁰ To trade in any part or derivative of an African lion, an export permit is required from the exporting country.¹⁷¹ To issue these export permits, the exporting state needs to ensure a number of conditions.¹⁷² 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.¹⁷³

The Parties to CITES meet every few years to consider or adopt amendments to Appendix I and II amongst other reasons.¹⁷⁴ At CoP13 in 2004 Kenya submitted a Proposal to transfer the African lion from Appendix II to Appendix I over growing concern for the species' survival.¹⁷⁵ The Proposal was withdrawn, however, and range states agreed that a series of regional conservation workshops would be held, organised by the IUCN.¹⁷⁶

In 2011 at the 25th CITES Animals Committee meeting¹⁷⁷ the inclusion of the African lion in the Periodic Review was approved and Kenya and Namibia volunteered to conduct this Review in consultation with 15 range states.¹⁷⁸ This Review concluded that African lions should stay on Appendix II, one of the reasons being that there is no science-based information to

¹⁶⁹ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 45.

¹⁷⁰ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 45.

¹⁷¹ CITES Arts IV(2) and (4); Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 45.

¹⁷² CITES Art IV.

¹⁷³ CITES Art IV(2).

¹⁷⁴ Sands and Peel *Principles* 472.

¹⁷⁵ *CITES Resolution: Review of Significant Trade in Specimens of Appendix II Species* (2004) Conf.12.8/Rev.CoP13.

¹⁷⁶ Nowell and Bauer *Regional Lion Conservation Strategy* 3.

¹⁷⁷ Established to provide scientific advice regarding animals that are, or may become, subject to CITES trade controls, and so provide technical support in decision-making under CITES. See CITES 2014 http://www.cites.org/eng/disc/ac_pc.php.

¹⁷⁸ 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 and Peel *Principles* 648; Kasiki and Hamunyela "Panthera Leo - Report" 1.

conclude that there has been a historical decline in populations due to trade.¹⁷⁹

To analyse CITES parties' trade legislation the National Legislation Project (NLP) was established in 1992.¹⁸⁰ The NLP divided states' legislation into three categories.¹⁸¹ 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 the implementation of CITES.¹⁸² In 2012 a number of African lion exporting states were listed under Category 2, such as Botswana, Kenya, Nigeria, Mozambique, South Africa and Tanzania.¹⁸³ Furthermore, several African lion exporting states were listed under Category 3, such as the Central African Republic, Chad and Ghana.¹⁸⁴

At a regional level, the *African Convention* requires authorisation for the exporting of lions, as well as permits for hunting or capture.¹⁸⁵ Authorisations are to include proof of the legal acquisition of the lion or lion product.¹⁸⁶ In addition, the *Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (Lusaka Agreement)*¹⁸⁷ could play a role in trade regulation at a regional level.¹⁸⁸ The Agreement aims at facilitating cooperation between states on issues of illegal trade in wild fauna and flora.¹⁸⁹ It does so by providing for the establishment of a Task Force. To ensure effective enforcement of the Agreement, Parties are expected to adopt legislative measures in that

¹⁷⁹ Criterion B of Annex 2a. See *CITES Resolution: Criteria for Amendment of Appendices I and II* (2010) Conf. 9.24/Rev.CoP15; Kasiki and Hamunyela "Panthera Leo - Report" 17.

¹⁸⁰ *CITES Resolution: National Laws for Implementation of the Convention* (1992) Conf. 8.4/Rev.CoP8.

¹⁸¹ *CITES Decision: Interpretation and Implementation of the Convention* (2010) CoP15/Doc. 20.

¹⁸² CITES 2012 <http://cites.org/sites/default/files/eng/notif/2012/E036.pdf>.

¹⁸³ CITES 2012 <http://cites.org/sites/default/files/eng/notif/2012/E036.pdf> 4.

¹⁸⁴ CITES 2012 <http://cites.org/sites/default/files/eng/notif/2012/E036.pdf> 6.

¹⁸⁵ *African Convention* Art IX(2)(b).

¹⁸⁶ *African Convention* Art IX(2)(b).

¹⁸⁷ *Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora* (1994) 1950 UNTS 35 (*Lusaka Agreement*).

¹⁸⁸ *Lusaka Agreement*, Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 49.

¹⁸⁹ *Lusaka Agreement* 2014 <http://www.lusakaagreement.org>.

regard.¹⁹⁰ However, no specific programme has yet been aimed at the illegal trade in the African lion.¹⁹¹

4 Analysis of the international and regional regime

It is good to see that the main threats to African lion populations, namely habitat loss, prey scarcity, retaliatory killing, trade and trophy hunting are covered, at least to some extent, by international law.¹⁹² However, some commentators believe that the implementation and enforcement of these regulatory mechanisms are inadequate to address the increasing threats to the species.¹⁹³ An analysis of the legal regime in place for each threat to African lion populations follows below.

4.1 African lion habitat loss

Habitat protection is emphasised in the international regime. The establishment of protected areas under the CBD encourages the restoration and maintenance of habitat in range states.¹⁹⁴ As lions are also found outside of protected areas, the provisions of the CBD directing states to manage biodiversity outside of protected areas is also encouraging.¹⁹⁵ However, in reality these obligations have not been met by all range states, as there is increasing use of land for development and agriculture within and adjacent to protected areas.¹⁹⁶ The provision is also weak in that it affords states a wide discretion as to the extent and condition of protected areas, and adjacent land, in their jurisdiction.¹⁹⁷ Linked to this, with regards to Aichi target 11, commentators suggest that even if global coverage is achieved, effective management of these areas is unlikely without monitoring and adaptation at local levels.¹⁹⁸

¹⁹⁰ Mrema "Lusaka Agreement" 233.

¹⁹¹ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 49.

¹⁹² Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 45.

¹⁹³ *CMS Proposal* 2014 16; Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 45.

¹⁹⁴ CBD Art 8; Matz 2005 *HJIL* 205.

¹⁹⁵ CBD Art 8(c).

¹⁹⁶ CBD Art 8(c); CBD Art 8; Matz 2005 *HJIL* 230; Winterbach *et al* 2012 *MR* 101.

¹⁹⁷ The wording "as far as possible and appropriate" in the chapeau to Art 8 affords this discretion. See CBD Art 8.

¹⁹⁸ Geldmann *et al* 2013 *BioCon* 230.

The UNCCD provisions encourage positive action by states in combating desertification and protecting natural habitat.¹⁹⁹ The WHC adds to this positive action by promoting the protection of certain sites that indirectly conserve some African lion habitat.²⁰⁰ However, like the CBD provisions, the WHC confers too much discretion on states, weakening their obligations.²⁰¹ The Ngorongoro Conservation Area in Tanzania is an example.²⁰² Even with a WHS listing, the lions in the Ngorongoro Conservation Area are threatened due to the increase in the extent of human settlements, land use change, and isolation from other lion populations.²⁰³

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.²⁰⁴ Range states are, for example, required to take steps to conserve migratory species as well as their habitat.²⁰⁵ Since the African lion population is transboundary in nature, this provision potentially offers significant protection to the African lion and its habitat.²⁰⁶ The recent Proposal by the Kenyan Government to add the African lion to the CMS Appendix II is also encouraging.²⁰⁷

What is also particularly positive is the encouragement of community education about their impacts on ecosystems and habitats.²⁰⁸ The SADC has enhanced this requirement by encouraging education and awareness around the conservation of wildlife at a regional level.²⁰⁹

Furthermore, listing the African lion under the *African Convention* provides much-needed species-specific protection across Africa.²¹⁰ The Convention includes the protection of African lion habitat necessary for the survival of

¹⁹⁹ UNCCD 2012 <http://www.unccd.int/en/about-the-convention/Pages/About-the-Convention.aspx>.

²⁰⁰ WHC 2014 <http://whc.unesco.org/en/list/156>; Kabii "Overview of African Wetlands".

²⁰¹ The *RAMSAR Convention's* role in habitat protection is similar to that of the WHC, and so has similar issues. Although RAMSAR provides provisions for the protection of certain wetlands, the implementation of these provisions by range states is questionable. See Gardener and Davidson "Ramsar Convention" 200-201.

²⁰² Kissui, Mosser and Packer 2010 *PE* 110.

²⁰³ Kissui, Mosser and Packer 2010 *PE* 110; Estes, Atwood and Estes 2006 *BioCon* 114.

²⁰⁴ CMS Art II.

²⁰⁵ CMS Art II(1).

²⁰⁶ *CMS Proposal* 2014 11.

²⁰⁷ *CMS Proposal* 2014 14, *CMS Draft Resolution* 2014.

²⁰⁸ CBD Art 13(a); WHC Art 27(1); UNCCD Art 19.

²⁰⁹ SADC Art 7(7).

²¹⁰ *African Convention* Art VIII(1).

the species.²¹¹ Yet it is important to mention that 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.²¹²

Overall, the international regime in place to protect African lion habitat is broad and difficult to implement while human populations continue to grow.²¹³ There are not enough protected areas and the protected areas that do exist are not connected to allow population interaction.²¹⁴ As the conservation of African lion habitat will also impact on the survival of their prey, the above analysis applies to ungulate species too.

4.2 African lion prey scarcity

The relevant provisions of the CBD encourage range states to promote the wise use of ungulates for meat and other purposes by communities.²¹⁵ The mechanisms established by CITES and the CBD to combat the rise in bushmeat trade are commendable.²¹⁶

The SADC's establishment of the Wildlife Sector Technical Committee promotes a more holistic and harmonised approach in the context of prey scarcity.²¹⁷ An important aspect of this Technical Committee is the development of policy guidelines for the conservation and sustainable use of wildlife.²¹⁸ Furthermore, the *African Convention* lists some ungulate species that require protection, but these species can be hunted with the required authorisation.²¹⁹ However, not all African lion range states are party to this Convention. In those that are not, ungulate species are protected only through domestic laws, if any at all.²²⁰

On the whole, it is problematic that there are no mechanisms in the international regime promoting the specific monitoring of prey populations

²¹¹ *African Convention* Art VIII(1).

²¹² Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 47-48.

²¹³ CBD Art 8; RAMSAR Art 2; *African Convention* Art VIII(1); Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 18.

²¹⁴ CBD Art 8; Winterbach *et al* 2012 *MR* 96.

²¹⁵ CBD Art 2.

²¹⁶ Lindsey *et al* *Illegal Hunting* 13.

²¹⁷ SADC Art 5(7).

²¹⁸ SADC Art 5(7).

²¹⁹ *African Convention* Art VIII(1).

²²⁰ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 47.

to provide a balance between commercial or subsistence hunting of ungulates and the needs of lions.²²¹

4.3 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 measures for threat mitigation.²²² Still, the CBD does encourage the establishment of protected areas, which provide for the much needed separation of people and wildlife.²²³ However, those that do exist are often poorly managed, lacking adequate law enforcement and regulation.²²⁴ The CBD adds to this by encouraging the development of legislation to protect threatened species at national levels.²²⁵ However, even though this provision is binding, states are given discretion as to the level of protection provided.²²⁶ This wide discretion is evident in the lack of national legislation directed at African lion protection in many range states, resulting in retaliatory killings going unpunished.²²⁷

The poisons used for retaliatory killing are easily available and inadequately regulated.²²⁸ Most of the pesticides used as poison are banned in developed countries but remain legally registered throughout Africa.²²⁹ The *Rotterdam Convention* offers the potential to involve the international community in combating the use of these pesticides for poisoning through the regulation and prohibiting of certain chemicals globally.²³⁰ Almost all lion range states are party to the Convention, except for Angola, the Central African Republic and South Sudan.²³¹ However, even some listed pesticides on Annex III of the Convention, such as Aldicarb and Dieldrin, are still being used illegally in range states to kill wildlife.²³²

²²¹ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 22.

²²² Packer and Kissui 2007 *TNAWNRC* 5.

²²³ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 19.

²²⁴ Creel *et al* 2013 *EL* 3.

²²⁵ CBD Art 8(k).

²²⁶ The wording "as far as possible and appropriate" in the chapeau to Art 8 affords this discretion. See CBD Art 8(k).

²²⁷ Kasiki and Hamunyela "Panthera Leo - Report" 14-17.

²²⁸ Ogada 2014 *ANYAS* 13.

²²⁹ Ogada 2014 *ANYAS* 13.

²³⁰ Ogada 2014 *ANYAS* 13.

²³¹ Ogada 2014 *ANYAS* 5.

²³² Ogada 2014 *ANYAS* 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.

The promotion of education and awareness through both regional and international instruments is possibly the most positive aspect of the regime for this threat. Community engagement and education is key in protecting the species. Linked with this is the promotion of incentive-based measures to engage communities in lion conservation.²³³ The support of the international community in programmes such as Lion Guardians provides the plight of the African lion with global as well as local attention.²³⁴

Overall, the increase in habitat degradation and in the number of human-lion interactions is increasing the prevalence of retaliatory killing.²³⁵ The unregulated availability of dangerous poisons is worrying, as it makes the killing of these animals very easy for communities.²³⁶

4.4 The trophy hunting industry

The CBDs provisions on the establishment of protected areas are constructive when regulating trophy hunting areas.²³⁷ However, unregulated trophy hunting still occurs in protected areas.²³⁸ Hunting concessions are also often allocated to significant portions of some protected areas.²³⁹ The regulation of the industry is provided for under the SADC: states are required to enforce restrictions on the number, sex, size and age of hunted wildlife.²⁴⁰ However, in some range states there seems to be little restriction and regulation in accordance with these parameters.²⁴¹ The SADC also encourages a harmonised approach among states towards legal instruments governing conservation and sustainable use.²⁴² However, range states are not harmonised in their approach to trophy hunting.²⁴³ Some states have imposed bans on the activity, some have incorporated sustainable methods into the industry, while others have no regulation at all.²⁴⁴

²³³ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 23.

²³⁴ Hazzah *et al* 2014 *CB* 852.

²³⁵ Valeix *et al* 2012 *JAE* 73; Packer and Kissui 2007 *TNAWNRC* 4.

²³⁶ Packer and Kissui 2007 *TNAWNRC* 10.

²³⁷ In using the African lion for commercial gain, states should adhere to the sustainable use provisions of the CBD. States have an obligation to exchange information that is relevant to the conservation and sustainable use of biodiversity. See CBD Arts 2, 8 and 17; Winterbach *et al* 2012 *MR* 92.

²³⁸ Croes *et al* 2011 *BioCon* 3070.

²³⁹ Croes *et al* 2011 *BioCon* 3065.

²⁴⁰ Lindsey *et al* 2013 *PLoS ONE* 2; SADC Art 7(3)(c).

²⁴¹ Lindsey *et al* 2013 *PLoS ONE* 2; Kiffner 2008 *ESU* 3.

²⁴² SADC Art 6(2)(b).

²⁴³ Lindsey *et al* 2013 *PLoS ONE* 9.

²⁴⁴ Packer *et al* "Impacts of Trophy Hunting" 8.

The captive-bred lion industry is mostly unregulated from an international perspective.²⁴⁵ States have predominantly made decisions on management at their own discretion.²⁴⁶ This provides for a varied approach to regulating the trophy hunting industry.²⁴⁷ The sustainable use provisions of the relevant instruments (CBD, SADC) have not been met by range states.²⁴⁸ States have different quota requirements, and there is no international scientific or governing body to regulate these quotas and to ensure transparency.²⁴⁹ The associated illegal capturing of wild lions for captive breeding is unregulated at an international level, and insufficiently monitored at local levels.²⁵⁰

4.5 Trade activities

The position of the African lion on Appendix II of CITES is one of the more positive aspects of the international regime. This promotes harmonised and sustainable trade.²⁵¹ In addition, these trade provisions are reiterated in the *African Convention*, which promotes regional consistency with the international regime.²⁵²

Although CITES contains these provisions, some commentators have criticised the outcome of the recent Periodic Review.²⁵³ Criticisms include the internal inconsistencies in omitting relevant information about state actions,²⁵⁴ the use of outdated trade data, and ultimately that the Review is

²⁴⁵ Funston "Conservation and Management of Lion" 125.

²⁴⁶ An example of this gap in regulation is evident in South Africa. Due to growing concerns over the captive-bred industry, the South African Government developed regulations for the industry. However, lion-breeding associations challenged these regulations. This resulted in the delisting of lions as large predators, which ultimately made the regulations null and void to the captive-bred lion industry and associated trophy hunting activities. This judgment is interesting as it deals with regulatory responses to moral concerns and weighs the economic and ethical considerations of the industry against one another. See Hall 2010 *SAJELP* 1; *South African Predator Breeders Association v Minister of Environmental Affairs and Tourism* 2011 2 SA 529 (SCA) (hereafter the *Breeders case*); Lindsey *et al* 2012 *SAJWR* 12.

²⁴⁷ Lindsey *et al* 2013 *PLoS ONE* 9; Packer *et al* "Impacts of Trophy Hunting" 8.

²⁴⁸ CBD Art 2; SADC Art 4(2)(a).

²⁴⁹ Lindsey *et al* 2013 *PLoS ONE* 2; Whitman *et al* 2007 *CB* 593.

²⁵⁰ Funston "Conservation and Management of Lion" 125.

²⁵¹ CITES Art IV(2); see Ch 3 s 5.1. Nowell and Bauer *Regional Lion Conservation Strategy* 28.

²⁵² *African Convention* Art IX.

²⁵³ Macsween 2014 <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>.

²⁵⁴ The report makes no mention of studies conducted in Benin, Cameroon, Tanzania, Zambia and Zimbabwe that indicate strong negative consequences of trophy hunting on lion population size and structure. No mention is made that Zambia placed a moratorium on trophy hunting of lions, that it is banned in Uganda, and that Cameroon does not issue export permits for lion trophies. See Macsween 2014

irrelevant to the current state of the African lion.²⁵⁵ Emphasis was given by Kenya and Namibia, who volunteered to conduct the Review, merely to the commercial value of trophy hunting.²⁵⁶ Furthermore, there were factual mistakes and errors of omission, which failed to deliver sound conclusions to CITES Parties relevant to the status of African lion populations in reality.²⁵⁷

The outcome of the CITES NLP in 2012 is also worrying. The trade legislation of many range states is listed as either Category 2 or 3.²⁵⁸ As trade increases in Africa, and increasingly to Asia, the ineffective compliance with and enforcement of CITES by range states will result in uncontrollable and unknown trade activity.²⁵⁹ This is evident in the rising illegal trade in lion cubs and lion bone.²⁶⁰ There is a lack of awareness of and knowledge about these trade markets, coupled with weak capacity and motivation within law enforcement agencies, making the illegal activity go largely unnoticed.²⁶¹ The *Lusaka Agreement* has the potential to increase enforcement measures through the establishment of the Task Force.²⁶² However, the Task Force does not recognise the African lion as being an animal that is adversely affected by illegal trade.²⁶³

There is a clear increase in trade in African lions, their parts and derivatives, and so the regulation of trade activities is of the utmost importance to ensure sustainable use.²⁶⁴ The rise in illegal trade is evident, and unreported and unregulated capturing and trading of lions, their parts and derivatives, will result in unsustainable use and negatively influence the survival of the species.²⁶⁵ Range states and the international community need to realise

<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>.

²⁵⁵ Macsween 2014 <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>.

²⁵⁶ Macsween 2014 <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>.

²⁵⁷ Macsween 2014 <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>.

²⁵⁸ CITES 2012 <http://cites.org/sites/default/files/eng/notif/2012/E036.pdf> 4.

²⁵⁹ Kasiki and Hamunyela "Panthera Leo - Report" 14.

²⁶⁰ *CMS Proposal* 2014 13; Hargreaves 2010 *JWCLAS* 20.

²⁶¹ *CMS Proposal* 2014 13.

²⁶² *Lusaka Agreement*.

²⁶³ *Lusaka Agreement* 2014 <http://www.lusakaagreement.org>.

²⁶⁴ Kasiki and Hamunyela "Panthera Leo - Report" 8; CITES 2012 <http://bit.ly/1RXSRL5>; Hargreaves 2010 *JWCLAS* 20.

²⁶⁵ Kasiki and Hamunyela "Panthera Leo - Report" 14; IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 25.

the extent of African lion trade activities before it is too late to stop the establishment of markets for lion produce.²⁶⁶

5 Concluding remarks

The purpose of this article was to determine whether or not the international legal regime for the African lion is effective in achieving their survival. Although the regime as a whole possesses some positive features, it is undermined by the negative aspects, which persist throughout. Implementation, compliance and enforcement issues throughout the regime are of concern. The instruments provide a broad framework for range states, which are then obliged to comply with and enforce the relevant provisions. However, the implementation of environmental laws is often challenging to such states due to their capacity constraints and lack of political will.²⁶⁷ In addition, some of the instruments that hold important provisions for the protection of African lions do not have sufficient enforcement measures to address non-compliance.²⁶⁸ It is evident that African lion populations across Africa are in decline.²⁶⁹ If the current regime were effective in conserving and protecting the species then this would not be the case.

Having found the international legal regime to be inadequate to achieve its aims, a few recommendations are offered below.

5.1 Recommendations

5.1.1 African lion habitat and prey protection

To promote African lion habitat protection throughout their range it is suggested that the African lion be listed under the CMS.²⁷⁰ If the lion were to be listed in Appendix II, the CMS could provide guidelines for the drafting of agreements between range states on the needs and requirements of the species across their range.²⁷¹ Possible listing under the CMS is to be

²⁶⁶ Kasiki and Hamunyela "Panthera Leo - Report" 12.

²⁶⁷ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 45; Ogada 2014 *ANYAS* 14; Rose "Gaps in the Implementation of Environmental Law" 11.

²⁶⁸ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 48.

²⁶⁹ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 12; Bauer, Nowell and Packer 2014 <http://www.iucnredlist.org/details/15951/0>.

²⁷⁰ *CMS Proposal* 2014.

²⁷¹ Non CMS states, such as South Sudan, Zambia, Malawi, the Central African Republic, Namibia and Botswana can still participate in agreements. See CMS 2014 <http://www.cms.int/en/parties-range-states>; CMS Arts V and IV(2).

negotiated by CITES Parties again at a later date.²⁷² In the interim, protected area management and regulation in range states needs to become a priority.²⁷³ Outside of protected areas, range states should identify and conserve relevant lion habitat.²⁷⁴ Habitat conservation should be integrated into national and regional regulations on livestock husbandry and agriculture to ensure better decision making in the allocation and management of protected areas.²⁷⁵

5.1.2 *Retaliatory and traditional killing*

Range states should adopt landscape level strategies that reduce human-wildlife conflict.²⁷⁶ These could follow the same design as the Lion Guardian Programme in Kenya.²⁷⁷ As a deterrent to retaliatory killing through the use of poison, the legal framework addressing pesticide regulation must be strengthened at both an international and a domestic level, enforcing harsher punishments for such a use of poisons.²⁷⁸ The international community needs to be made aware of the extent of the damage these activities cause to lion populations to ensure international support for range states.²⁷⁹

5.1.3 *The trophy hunting industry*

It is recommended that the recreational hunting of African lions should be reduced, and that that which does occur should be better regulated.²⁸⁰ Range states need to have uniform quota levels to ensure that the approach to the industry is equal throughout the range of the species.²⁸¹ To encourage sustainability, quotas for female lions should not be granted by range states.²⁸² As stated above, a CMS Appendix II listing is proposed.²⁸³ It is also suggested that any agreements established by range states should

²⁷² CMS Draft Resolution 2014.

²⁷³ Creel *et al* 2013 EL 3.

²⁷⁴ Creel *et al* 2013 EL 3.

²⁷⁵ IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf 20.

²⁷⁶ Creel *et al* 2013 EL 3.

²⁷⁷ Hazzah *et al* 2014 CB 859.

²⁷⁸ Ogada 2014 ANYAS 14.

²⁷⁹ Ogada 2014 ANYAS 14.

²⁸⁰ Creel *et al* 2013 EL 3.

²⁸¹ Packer *et al* "Impacts of Trophy Hunting" 9.

²⁸² Packer *et al* "Impacts of Trophy Hunting" 9.

²⁸³ CMS Art IV.

include measures to control and manage the legal and illegal hunting, capturing or killing of migratory species.²⁸⁴

The sustainable trophy hunting of lions could support the conservation of lions and their habitat, however.²⁸⁵ Income generated from this industry needs to be put back into African lion conservation efforts.²⁸⁶ More research is required to enable range states to make informed decisions on hunting quotas.²⁸⁷

In addition, the hunting of captive-bred animals should be disallowed. It undermines the conservation credibility of the legitimate hunting industry and has no purpose other than commercial gain for the captive breeders.²⁸⁸

5.1.4 Trade activities

In addressing the increase in trade, listing the African lion on CITES Appendix I should be reconsidered by the CITES Committee. However, due to the fact that many range states are struggling to incorporate the necessary CITES provisions into national legislation, a CITES up-listing may be ineffective.²⁸⁹ Therefore, perhaps a moratorium on trade in African lion bone should be established for a period to allow a thorough analysis of the current trade in lion bone.²⁹⁰ Range states should not ignore the staggering increase in the lion bone trade, and should act before the market is fully established.²⁹¹

Conversely, it could become the responsibility of importing developed states to curb the increase in the lion trade. Australia, for example, is considering treating trade in African lion specimens as if the species were listed on Appendix I of CITES.²⁹²

²⁸⁴ CMS Arts V(5)(j) and V(5)(k).

²⁸⁵ Packer *et al* "Impacts of Trophy Hunting" 9.

²⁸⁶ Packer *et al* "Impacts of Trophy Hunting" 9.

²⁸⁷ IUCN SSC Cat SG 2006 http://www.conservaforce.org/pdf/C_W_Lion_Strategy_UK.pdf 24.

²⁸⁸ Packer *et al* "Impacts of Trophy Hunting" 9.

²⁸⁹ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 48.

²⁹⁰ Macleod 2012 <http://mg.co.za/article/2012-07-12-officials-turn-a-blind-eye-to-the-smuggling-of-wild-lions>.

²⁹¹ Macleod 2012 <http://mg.co.za/article/2012-07-12-officials-turn-a-blind-eye-to-the-smuggling-of-wild-lions>.

²⁹² Director: Wildlife Trade Regulation 2014 <http://www.environment.gov.au/biodiversity/wildlife-trade/comment/stricter-measures-import-export-african-lion>.

Ultimately, there will never be reliable data about the extent of an illegal trade, as it is often difficult to monitor illegal activities.²⁹³ Therefore it is recommended that a specific programme be established under the *Lusaka Agreement* Task Force to combat this threat and to take action against those involved.²⁹⁴ To do so would be consistent with the precautionary principle.²⁹⁵

5.1.5 Additional recommendations

Compliance and enforcement issues are difficult to address through a broad international framework. Capacity constraints are often the driving reason why developing states do not effectively provide for provisions laid out in relevant Conventions and Agreements.²⁹⁶ Perhaps the CBD's financial support provision can be applied, to enable range states to comply with and implement the provisions of the CBD for the *in-situ* conservation of African lions.²⁹⁷

In addition, the cost of conservation and protection at a landscape level is high.²⁹⁸ It is suggested that an international fund targeted at African lion conservation and protection be set up to assist range states.²⁹⁹

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.³⁰⁰ As it is so important it is worrying to see that the population is continuing to decline.³⁰¹ It has been shown that any

²⁹³ Nowell and Bauer *Regional Lion Conservation Strategy* 25.

²⁹⁴ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 49.

²⁹⁵ Wiersema 2015 *MJIL* 388.

²⁹⁶ Rose "Gaps in the Implementation of Environmental Law".

²⁹⁷ CBD Arts 20(2) and 21.

²⁹⁸ Managing unfenced lion populations requires roughly US \$2 000 per km² per year. See *CMS Proposal* 2014 16.

²⁹⁹ *CMS Proposal* 2014 16.

³⁰⁰ 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. See Braun 2012 <http://newswatch.nationalgeographic.com/2012/12/06/lion-numbers-plunge-as-african-wilderness-succumbs-to-human-pressure/>

³⁰¹ Hazzah, Mulder and Frank 2009 *BioCon* 2428.

increase in current threats will have a negative impact on the remaining lion populations.³⁰²

It is evident that there needs to be a regulatory framework to combat, or overcome, these threats before it is too late to save the species. Therefore the African lion has been subject to increasing attention from the global community.³⁰³ Despite their IUCN listing as “vulnerable”, there is a growing concern that African lions need more international protection.³⁰⁴ The current international legal regime for the protection of the African lion does possess some positive provisions that promote conservation, education and sustainable trade. However, lion populations are still decreasing, and so it is believed that this regime is inadequate to address the current threats to the species.³⁰⁵ In addition, it is distressing that the 2006 IUCN strategies referred to throughout this article have not been adopted effectively by range states.³⁰⁶ Recommendations have thus been made in this article to address these issues and to provide a possible way forward in which the international regime could protect this valuable species.

Taking action now to address the gaps in the existing international and regional legal regimes for the protection of the African lion will ensure that the species does not decline to a status of “endangered” or worse.³⁰⁷ The international community, including the range states, needs to take responsibility and make the recommended changes now. If we wait too long to protect and conserve our lions, it may be too late to save the species.³⁰⁸

Bibliography

Literature

Bauer and Van Der Merwe 2004 *OIJC*

Bauer H and Van Der Merwe S "Inventory of Free-ranging Lions *Panthera Leo* in Africa" 2004 *OIJC* 26-31

³⁰² Nowell and Bauer *Regional Lion Conservation Strategy* 20.

³⁰³ Bauer, Nowell and Packer 2014 <http://www.iucnredlist.org/details/15951/0>.

³⁰⁴ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 6.

³⁰⁵ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 12; Bauer, Nowell and Packer 2014 <http://www.iucnredlist.org/details/15951/0>.

³⁰⁶ *CMS Proposal* 2014 16.

³⁰⁷ Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> 6.

³⁰⁸ Hazzah, Mulder and Frank 2009 *BioCon* 2428.

CBD Secretariat, UNCCD and Oslo Consortium *Valuing the Biodiversity*
Convention on Biological Diversity Secretariat, Global Mechanism of the UN
Convention to Combat Desertification and OSLO Consortium *Valuing the
Biodiversity of Dry and Sub-humid Lands* (Secretariat of the Convention on
Biological Diversity Montreal 2013)

CITES Secretariat "CITES and Bushmeat"

CITES Secretariat "CITES and Bushmeat" Presentation at the *Joint Meeting
of the CBD Liaison Group on Bushmeat and the CITES Central Africa
Bushmeat Working Group* (7-10 June 2011 Nairobi)

Creel *et al* 2013 *EL*

Creel S *et al* "Conserving Large Populations of Lions: The Argument for
Fences has Holes" 2013 (16) *EL* 1-4

Croes *et al* 2011 *BioCon*

Croes BM *et al* "The Impact of Trophy Hunting on Lion (*Panthera Leo*) and
Other Large Carnivores in the Benou Complex, Northern Cameroon" 2011
BioCon 3064-3072

Ervin *et al* *Making Protected Areas Relevant*

Ervin J *et al* *Making Protected Areas Relevant: A Guide to Integrating
Protected Areas into Wider Landscapes, Seascapes and Sectoral Plans
and Strategies* (Secretariat of the Convention on Biological Diversity
Montreal 2010) 7-64

Estes, Atwood and Estes 2006 *BioCon*

Estes RD, Atwood JL and Estes AB "Downward Trends in Ngorongoro
Crater Ungulate Populations 1986-2005: Conservation Concerns and the
Need for Ecological Research" 2006 *BioCon* 106-120

Fitzherbert *et al* 2014 *BioCon*

Fitzherbert E *et al* "From Avengers to Hunters: Leveraging Collective Action
for the Conservation of Endangered Lions" 2014 *BioCon* 84-92

Funston "Conservation and Management of Lion"

Funston P "Conservation and Management of Lion in Southern Africa:
Status, Threats, Utilisation and Restoration Option" in Croes B *et al* (eds)
*Management and Conservation of Large Carnivores in West and Central
Africa* (Institute of Environmental Sciences Leiden 2008) 109-132

Gardener and Davidson "Ramsar Convention"

Gardener RC and Davidson NC "The Ramsar Convention" in LePage BA (ed) *Wetlands: Integrating Multidisciplinary Concepts* (Springer New York 2011) 189-204

Geldmann *et al* 2013 *BioCon*

Geldmann J *et al* "Effectiveness of Terrestrial Protected Areas in Reducing Habitat Loss and Population Decline" 2013 *BioCon* 230-238

Hall 2010 *SAJELP*

Hall J "Building the Ethical Dimension of the Environmental Right" 2010 *SAJELP* 1-21

Hargreaves 2010 *JWCLAS*

Hargreaves R "Countering the Moral and Ethical Argument for Canned Hunting of Captive Bred Lions in South Africa" 2010 (3) *JWCLAS* 7-26

Hazzah *et al* 2014 *CB*

Hazzah L *et al* "Efficacy of Two Lion Conservation Programs in Maasailand, Kenya" 2014 *CB* 851-860

Hazzah, Mulder and Frank 2009 *BioCon*

Hazzah L, Mulder M and Frank L "Lions and Warriors: Social Factors Underlying Declining African Lion Populations and the Effect of Incentive-based Management in Kenya" 2009(142) *BioCon* 2428-2437

Kabii "Overview of African Wetlands"

Kabii T "An Overview of African Wetlands" in Hails A (ed) *Wetlands, Biodiversity, and the Ramsar Convention* (Ramsar Convention Bureau Gland 1997) 29-42

Kasiki and Hamunyela "Panthera Leo - Report"

Kasiki S and Hamunyela E "CITES: Panthera Leo - Report of Kenya and Namibia" Presented at the *Twenty-seventh Meeting of the Animals Committee* (28 April - 3 May 2014 Veracruz) 1-53

Kiffner 2008 *ESU*

Kiffner C "African Lions and the Trophy Hunting Dilema" 2008 (25) *ESU* 1-5

Kissui, Mosser and Packer 2010 *PE*

Kissui BM, Mosser A and Packer C "Persistence and Local Extinction of Lion Prides in the Ngorongoro Crater, Tanzania" 2010 *PE* 103-111

Lindsey *et al* 2012 *SAJWR*

Lindsey PA *et al* "Possible Relationships between the South African Captive-bred Lion Hunting Industry and the Hunting and Conservation of Lions Elsewhere in Africa" 2012 *SAJWR* 11-22

Lindsey *et al* 2013 *PLoS ONE*

Lindsey PA *et al* "The Trophy Hunting of African Lions: Scale, Current Management Practices and Factors Undermining Sustainability" 2013 (8) *PLoS ONE* 1-12

Lindsey *et al* *Illegal Hunting*

Lindsey PA *et al* *Illegal Hunting and the Bush-meat Trade in Savanna Africa: Drivers, Impacts and Solutions to Address the Problem* (FAO New York 2015) 4-56

Loveridge, Packer and Dutton "Recreational Hunting of Lions"

Loveridge AJ, Packer C and Dutton A "Science and the Recreational Hunting of Lions" in Dickson B, Hutton J and Adams WM (eds) *Recreational Hunting, Conservation and Rural Livelihoods* (Blackwell London 2009) 108-124

Matz 2005 *HJIL*

Matz N "Chaos or Coherence? Implementing and Enforcing the Conservation of Migratory Species through Various Legal Instruments" 2005 *HJIL* 197-215

Mrema "Lusaka Agreement"

Mrema EM "Lusaka Agreement as a Mechanism for Enforcement of CITES" in *Seventh International Conference on Environmental Compliance and Enforcement* (9-15 April 2005 Marrakech) 227-238

Nowell and Bauer *Regional Lion Conservation Strategy*

Nowell K and Bauer H *Regional Lion Conservation Strategy for Eastern and Southern Africa* (IUCN SSC Cat SG Gland 2006) 1-32

Nowell and Jackson *Status Survey*

Nowell K and Jackson P *Status Survey and Conservation Action Plan: Wild Cats* (IUCN SSC Cat SG Gland 1996) 1-280

Ogada 2014 *ANYAS*

Ogada DL "The Power of Poison: Pesticide Poisoning of Africa's Wildlife" 2014 *ANYAS* 1-20

Packer and Kissui 2007 *TNAWNRC*

Packer C and Kissui BM "Managing Human-Lion Conflicts" 2007 *TNAWNRC* 1-15

Packer *et al* "Impacts of Trophy Hunting"

Packer C *et al* "Impacts of Trophy Hunting on Lions in East and Southern Africa: Recent Offtake and Future Recommendations" Background Paper for the *Eastern and Southern African Lion Conservation Workshop* (11-13 January 2006 Johannesburg) 2-22

Riggio *et al* 2013 *BioCon*

Riggio J *et al* "The Size of Savannah Africa: A Lion's (*Panthera Leo*) View" 2013 *BioCon* 18-34

Rose "Gaps in the Implementation of Environmental Law"

Rose G "Gaps in the Implementation of Environmental Law at the National, Regional and Global Level" Paper delivered at the *First Preparatory Meeting of the World Congress on Justice, Governance and Law for Environmental Sustainability* (12-13 October 2011 Kuala Lumpur) 1-29

Sands and Peel *Principles*

Sands P and Peel J *Principles of International Environmental Law* (Cambridge University Press Cambridge 2012) 1-897

Tende *et al* 2014 *PLoS ONE*

Tende T *et al* "Individual Identification and Genetic Variation of Lions from Two Protected Areas in Nigeria" 2014 (9) *PLoS One* 1-11

Valeix *et al* 2012 *JAE*

Valeix M *et al* "Behavioural Adjustments of a Large Carnivore to Access Secondary Prey in a Human-dominated Landscape" 2012 *JAE* 73-81

Wiersema 2015 *MJIL*

Wiersema A "Uncertainty, Precaution, and Adaptive Management in Wildlife Trade" 2015 *MJIL* 375-424

Whitman *et al* 2007 *CB*

Whitman KL *et al* "Modelling the Effects of Trophy Selection and Environmental Disturbance on a Simulated Population of African Lions" 2007 *CB* 591-601

Winterbach *et al* 2012 *MR*

Winterbach HEK *et al* "Key Factors and Related Principles in the Conservation of Large African Carnivores" 2012 *MR* 89-110

Case law

South African Predator Breeders Association v Minister of Environmental Affairs and Tourism 2011 2 SA 529 (SCA)

International instruments

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

CITES Decision: Interpretation and Implementation of the Convention (2010) CoP15/Doc. 20

CITES Resolution: Criteria for Amendment of Appendices I and II (2010) Conf. 9.24/Rev.CoP15

CITES Resolution: National Laws for Implementation of the Convention (1992) Conf. 8.4/Rev.CoP8

CITES Resolution: Review of Significant Trade in Specimens of Appendix II Species (2004) Conf.12.8/Rev.CoP13

CMS Draft Resolution: Conservation and Management of the African Lion, Panthera Leo (2014) UNEP/CMS/COP11/CRP4

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

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

Convention on Biological Diversity (1992) 31 ILM 818

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

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

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

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

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

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

UN Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994) 33 ILM 1328

Internet sources

Anon 2005 http://www.huntingreport.com/images2/pdf/Final_Draft_Panel_of_Expert_Report_to_DEAT.pdf

Anon 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 6 September 2014

Bauer 2003 http://www.carnivoreconservation.org/files/thesis/bauer_2003_phd.pdf

Bauer H 2003 *Lion Conservation in West and Central* http://www.carnivoreconservation.org/files/thesis/bauer_2003_phd.pdf accessed 7 September 2014

Bauer, Nowell and Packer 2014 <http://www.iucnredlist.org/details/15951/0>

Bauer H, Nowell K and Packer C 2014 *Panthera Leo IUCN Red List of Threatened Species* <http://www.iucnredlist.org/details/15951/0> accessed 10 August 2014

Braun 2012 <http://newswatch.nationalgeographic.com/2012/12/06/lion-numbers-plunge-as-african-wilderness-succumbs-to-human-pressure/>

Braun D 2012 *Lion Numbers Plunge as African Wilderness Succumbs to Human Pressure* <http://newswatch.nationalgeographic.com/2012/12/06/lion-numbers-plunge-as-african-wilderness-succumbs-to-human-pressure/> accessed 8 August 2014

CBD 2014 <http://www.cbd.int/information/parties.shtml>

CBD 2014 *List of Parties* <http://www.cbd.int/information/parties.shtml> accessed 6 August 2014

CITES 2004 http://www.cites.org/common/cop/13/raw_props/KE-Lion.pdf
CITES 2004 *Consideration of Proposals for Amendment of Appendices I and II* http://www.cites.org/common/cop/13/raw_props/KE-Lion.pdf
accessed 7 October 2014

CITES 2012 <http://bit.ly/1RXSRL5>
CITES 2012 *Trade Database: Comparative Tabulation Report*
<http://bit.ly/1RXSRL5> accessed 7 September 2014

CITES 2012 <http://cites.org/sites/default/files/eng/notif/2012/E036.pdf>
CITES 2012 *National Law for Implementation of the Convention*
<http://cites.org/sites/default/files/eng/notif/2012/E036.pdf> accessed 7
October 2014

CITES 2014 http://www.cites.org/eng/disc/ac_pc.php
CITES 2014 *Animal Committee* http://www.cites.org/eng/disc/ac_pc.php
accessed 6 August 2014

CMS 2014 <http://www.cms.int/en/meetings/standing-committee>
CMS 2014 *Standing Committee* <http://www.cms.int/en/meetings/standing-committee>
accessed 26 November 2014

CMS 2014 <http://www.cms.int/en/parties-range-states>
CMS 2014 *Parties and Range States* <http://www.cms.int/en/parties-range-states>
accessed 7 October 2014

Director: Wildlife Trade Regulation 2014 <http://www.environment.gov.au/biodiversity/wildlife-trade/comment/stricter-measures-import-export-african-lion>

Australian Government: Department of Environment, Director: Wildlife Trade Regulation 2014 *Proposal to Take Stricter Domestic Measures to Regulate the Import and Export of Specimens of African Lion*
<http://www.environment.gov.au/biodiversity/wildlife-trade/comment/stricter-measures-import-export-african-lion> accessed 25 November 2014

IUCN 2014 http://www.iucnredlist.org/static/categories_criteria_2_3
IUCN 2014 *1994 Categories and Criteria Version 2.3*
http://www.iucnredlist.org/static/categories_criteria_2_3 accessed 10
August 2014

IUCN 2014 <http://maps.iucnredlist.org/map.html?id=15951>
IUCN 2014 *Species Range* <http://maps.iucnredlist.org/map.html?id=15951>
accessed 6 October 2014

IUCN SSC Cat SG 2006 http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf

IUCN SSC Cat SG 2006 *Conservation Strategy for the Lion in West and Central Africa*

http://www.conservationforce.org/pdf/C_W_Lion_Strategy_UK.pdf
accessed 7 October 2014

KWS 2014 <http://www.kws.org/about/index.html>

KWS 2014 *Overview: About Us* <http://www.kws.org/about/index.html>
accessed 7 October 2014

Lenarz 2014 <http://www.cms.int/en/news/global-protection-proposed-sharks-rays-sawfish-polar-bear-and-lions>

Lenarz V 2014 *Global Protection Proposed for Sharks, Rays, Sawfish, Polar Bear and Lions* <http://www.cms.int/en/news/global-protection-proposed-sharks-rays-sawfish-polar-bear-and-lions> accessed 7 October 2014

Lion Guardians 2014 <http://lionguardians.org/our-tools>

Lion Guardians 2014 *Our Tools* <http://lionguardians.org/our-tools> accessed 7 October 2014

Lusaka Agreement 2014 <http://www.lusakaagreement.org>

Lusaka Agreement 2014 *Task Force* <http://www.lusakaagreement.org>
accessed 16 November 2014

Macleod 2012 <http://mg.co.za/article/2012-07-12-officials-turn-a-blind-eye-to-the-smuggling-of-wild-lions>

Macleod F 2012 *Officials Turn a Blind Eye to the Smuggling of Wild Lions* <http://mg.co.za/article/2012-07-12-officials-turn-a-blind-eye-to-the-smuggling-of-wild-lions> accessed 26 November 2014

Macsween 2014 <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>

Macsween C 2014 *The CITES Draft Periodic Review on Lions is Disgrace and Could Do Great Damage to Lions* <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 7 October 2014

Parker 2012 <http://mg.co.za/article/2012-07-04-sa-breeders-embrace-growing-asian-demand-for-lion-bones>

Parker F 2012 *SA Breeders Embrace Growing Asian Demand for Lion Bones* <http://mg.co.za/article/2012-07-04-sa-breeders-embrace-growing-asian-demand-for-lion-bones> accessed 12 November 2014

Parry 2015 <http://www.dailymail.co.uk/news/article-3190750/One-Cecil-lion-s-cubs-killed-rival-male-sparking-fears-remaining-seven-just-days-left-live-beast-slaughtered-dentist.html>

Parry H 2015 *One of Cecil's Cubs is Killed by Rival Male* <http://www.dailymail.co.uk/news/article-3190750/One-Cecil-lion-s-cubs-killed-rival-male-sparking-fears-remaining-seven-just-days-left-live-beast-slaughtered-dentist.html> accessed 15 August 2015

Place *et al* 2011 <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie>

Place J *et al* 2011 *Petition to List the African Lion (Panthera Leo) as Endangered Pursuant to the US Endangered Species Act* <http://www.ifaw.org/united-states/resource-centre/petition-list-african-lion-panthera-leo-leo-endangered-pursuant-us-endangered-specie> accessed 10 August 2014

Ramsar Convention 2014 <http://www.ramsar.org/country-profiles>

Ramsar Convention 2014 *Country Profiles* <http://www.ramsar.org/country-profiles> accessed 7 October 2014

Roberts 2004 <https://awionline.org/content/will-cites-ignore-its-responsibilitycon-tribute-african-lion-conservation>

Roberts A 2004 *Will CITES Ignore Its Responsibility to Contribute to African Lion Conservation?* <https://awionline.org/content/will-cites-ignore-its-responsibility-contribute-african-lion-conservation> accessed 7 October 2014

UNCCD 2012 <http://www.unccd.int/en/about-the-convention/Pages/About-the-Convention.aspx>

UNCCD 2012 *About the Convention* <http://www.unccd.int/en/about-the-convention/Pages/About-the-Convention.aspx> accessed 7 October 2014

WHC 2014 <http://whc.unesco.org/en/list/156/>

WHC 2014 *Serengeti National Park* <http://whc.unesco.org/en/list/156/> accessed 6 October 2014

World Bank Group 2014 <http://data.worldbank.org/region/sub-saharan-africa>

World Bank Group 2014 *Data* <http://data.worldbank.org/region/sub-saharan-africa> accessed 6 September 2014

List of Abbreviations

African Convention	African Convention on the Conservation of Nature and Natural Resources
ANYAS	Annals of the New York Academy of Sciences
BioCon	Biological Conservation
CB	Conservation Biology
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CoP	Conference of the Parties
EL	Ecology Letters
ESU	Endangered Species Update
HJIL	Heidelberg Journal of International Law
IUCN	International Union for the Conservation of Nature
IUCN SSC Cat SG	IUCN Species Survival Commission Cat Specialist Group
JAE	Journal of Applied Ecology
JWCLAS	Journal of the WildCat Conservation Legal Aid Society
KWS	Kenya Wildlife Service
Lusaka Agreement	Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora
MJIL	Michigan Journal of International Law
MR	Mammal Review
NLP	National Legislation Project
OIJC	Oryx-International Journal of Conservation
PE	Population Ecology
RAMSAR	Convention on Wetlands of International Importance especially as Waterfowl Habitat

Rotterdam Convention	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
SAJELP	South African Journal of Environmental Law and Policy
SAJWR Task Force	South African Journal of Wildlife Research Task Force for Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora
TNAWNRC	Transactions of the North American Wildlife and Natural Resources Conference
UN NCCD	United Nations United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa
WHC	Convention Concerning the Protection of the World Cultural and Natural Heritage
WHS	World Heritage Site