

Summary Report: Trophy hunting and lion population status in eastern, western and central, and southern Africa



LionAid 2011

Executive summary

This report makes an assessment of the sustainability of lion trophy hunting in several African nations that permit(ed) the practice. Recommendations include a complete cessation of all trophy hunting in western and central Africa, where lion populations are in steepest decline. Studies have shown that these lions are highly genetically distinct from lions in eastern and southern Africa, with highest resemblance to lions in India and northern Africa (so-called Barbary lions, extinct in the wild, some maintained in zoos). These lions are unique and very severely threatened with regional extinction. Recent extinctions of lions are

noted in Congo, Cote d'Ivoire, and Ghana, and virtual extinction in Nigeria. Trophy hunting is dependent on unknown source populations and is considered highly unsustainable.

In southern Africa unsustainable levels of hunting apply to Zambia, Namibia, and especially Zimbabwe. Mozambique needs urgent population assessments of lions in hunting concessions to determine any level of sustainability. Botswana has a current moratorium on lion trophy hunting. South Africa could not be assessed as CITES export numbers reveal a total of 2651 wild lion trophies exported 2000-2009 from a very small source population outside protected areas. CITES is urged to closely examine lion exports from South Africa as these are very likely to be illegally augmented by animals bred in captivity and illegal hunting in neighbouring countries.

In eastern Africa, Tanzania maintains the largest continental lion population, but excessive quota allocation, corrupt practices, shooting of male lions as young as 2 yrs, and indications of a severe depletion of lions in hunting concessions require urgent action. Ethiopia exports few trophies, but source populations are completely unknown.

Overall recommendations in this report are to cease all lion trophy hunting in Africa until independent assessments can be made of all populations in hunting concessions and to allow such populations to stabilize.

Rationale

Lion population assessments for various African countries have been made in 2002 (published in two reports, one not available until 2004); as a result of two lion population assessments made by regional meetings organized by the IUCN; and as supplementary assessments made for some countries in 2009 and 2010. CITES export and import numbers are available on the trade data website, and although the numbers change weekly as both new and older information is added, this remains the best source of information on trophy hunting pressure on lion populations. It should be noted that CITES only deals with exports, and does not reflect additional lion trophy hunting within national borders, which is expected to be heavy especially in countries like South Africa.

The two IUCN regional meetings (in Cameroon for western and central Africa in late 2005 and South Africa for southern and eastern Africa in early 2006) provided data on lion population numbers by delegates and also information on population trends and threats.

Lions are difficult to count accurately without considerable financial investment. Lion population numbers presented in this report are thus largely based on “guesstimates” by “informed persons” sent standardized questionnaires. Yet for all inaccuracies and hopeful extrapolations, these numbers are the best available to date. Reliability is highly dependent on survey methods, and all are likely to have considerable margins of error. Actual ground surveys in western Africa revealed small populations of lions in **two** of 13 areas where lions were thought to occur according to the IUCN reports – 11 areas had no lions at all. Ground truthing of actual lion numbers is crucial for any national, regional, and continental lion population assessment. To date, no lion hunting concession holder has permitted any independent assessment of lion numbers and population demographics.

It is also very important to point out that the lion population estimates presented in this report consist of the ENTIRE lion population. This includes adult males (>4 yrs, reproductive at 5-6 yrs) and females (>4 yrs at first reproduction), subadults (>2<4 yrs), and cubs (<2yrs). Based on population analyses, we estimate that any population will consist of approximately 15% adult males, 35% adult females, and 50% subadults and cubs. Trophy hunting pressure is to a very large extent on male lions as few countries allow wild females to be hunted. In addition, we estimate that approximately 40% of lions (much higher in some countries) reside in protected and or non-consumptive photographic areas and should thus (except in countries that allow trophy hunting on the borders of protected areas – South Africa, Zimbabwe, Zambia, Namibia among many others) not be subject to trophy hunting. In terms of assessing trophy hunting numbers in each country, all population numbers given in this report should thus be carefully assessed in terms of “available lions”. For example in Tanzania, the highest estimate of 16,800 lions should be reduced to 10080 lions of all ages present outside strictly protected areas, and further reduced to 1512 predicted adult male lions that form the basis for the Tanzanian trophy hunting industry. A ten-year offtake of 1955 exports is thus clearly in conflict with any sustainable offtake, and has been shown to include subadult males as trophies and a considerable influence on male lions in protected areas bordering on hunting concessions.

Another important factor in lion trophy hunting concerns a widely ignored aspect of lion biology. Resident pride males fulfil a paternal function in protecting cubs. Prides need a period of stability >2yrs to successfully raise cubs to some level of independence. A pride takeover includes infanticidal behaviour by new males to all young cubs sired by previous

males. Females also experience mortality during pride take-overs when they attempt to protect their cubs from new males. High rates of replacement of pride males as they are successively hunted and replaced implies serious reproductive consequences and pride instability. From a biological viewpoint, any species that combines parental care and infanticidal behaviour by replacement males poses great difficulties for any level of sustainable hunting.

A recent IUCN Animals Committee meeting requested a Periodic Review of lion populations to be chaired by Kenya and Namibia. Results are to be presented at the next CITES Conference of Parties meeting in Thailand in 2013. It is to be hoped that the Periodic Review will only consider peer-reviewed scientific information rather than the proliferation of ad hoc reports currently emerging from vested interest groups. Lion trophy hunting is highly lucrative to hunting operators and nations collecting trophy fees. However, such finances are earned at the expense of lion populations currently in freefall decline. While six long-term viable populations remain in protected areas, these lions are additionally highly susceptible to endemic diseases like Feline Immunodeficiency virus (up to 95% infection in populations) and introduced diseases like bovine tuberculosis (South Africa) and canine distemper (widespread).

There are still reasonable lion numbers remaining in eastern and southern Africa, although the continental number to some extent consists of adding together many small and isolated populations. Intelligent conservation of this species requires immediate removal of all additional mortality factors – of which trophy hunting is a major source. To date, CITES numbers (continuously augmented as mentioned above) indicate that well over 6300 lion trophies have been exported over the past ten years, not counting exports of additional lion products such as skins, teeth, claws, skulls, even feet. Lions are under severe threat in Africa, and only by taking urgent action to stabilize populations can we prevent this species from becoming the next tiger.

Regional summaries

A. Country by country trophy hunting assessment – western and central Africa

Burkina Faso

Trophies exported^a

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
20	10	13	20	14	13	16	15	14	16	151

Major importing countries – France 78%, Italy 6%

Country lion estimates

Bauer – Vd Merwe 2004	Chardonnet 2002	IUCN 2006
100	444	Disagreement: 100-500

Lion threats

Disease ¹	Illegal ²	PAC ³	Trophy ⁴	Poachin g ⁵	Livestoc k ⁶	Encroac h ⁷	Resource 8
No data	Some	Some	Some	Some	Some	None	Some

Summary – unknown population size, illegal offtake, problem animal control, livestock encroachment. Lions exclusively in W-Arly-Penjari region, 40% protected.

Lions shared with Benin (see below)

Conclusion: Lions overhunted, unsustainable

a. Official CITES export figures

1. Disease – Any knowledge of disease threats that might affect lion populations;
2. Illegal – Illegal hunting, poaching, snaring, poisoning, trapping of lion populations;
3. PAC – Official Problem Animal Control measures taken by wildlife authorities;
4. Trophy – Trophy hunting permitted on the lion population(s);
5. Poaching – levels of illegal meat poaching, bushmeat use, depletion of lion natural prey;
6. Livestock – Presence of livestock populations in protected areas;
7. Encroach – Human encroachment and settlement in protected areas;
8. Resource – Human resource use in protected areas – wood, grass, honey, etc .

Benin

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
4	3	0	0	0	2	2	0	0	0	11

Major importing countries: France 54%, USA 27%

Country lion estimates

Bauer vd Merwe 2004	Chardonnet 2002	IUCN 2006	Mesochina 2010
65	325	100-500	390

Numbers reflect overlap with Burkina Faso

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
No data	Some	Some	Some	Some	Some	Some	Some

Summary – unknown population size, illegal offtake, problem animal control, livestock encroachment. Lions exclusively in W-Arly-Penjari region shared with Burkina Faso 40% protected.

Other CITES exports (2000-2009): Live – 6, Skin pieces – 12, Skins - 10

Conclusion: Lions hunted from unknown lion populations, unsustainable until populations can be assessed

Cote d'Ivoire

No trophy hunting exports 2000-2009, last trophy exports 1995

Country estimates

Bauer – Vd Merwe 2004	Chardonnet 2002	IUCN 2006
30	100	<50

Lions only historically reported in Comoe-Leraba area, 70% protected.

Lion threats

Disease	Illegal	PAC	Trophy	Poachin g	Livestoc k	Encroac h	Resource
No data	Some	None	None	Heavy	None	None	None

Summary: No lions found in recent survey by Henshel et al (2010)

Conclusion: lion population extinct.

Central African Republic

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
14	9	0	0	0	3	3	9	1	18	57

Major importing countries: France 72%, Denmark 9%

Bauer vd Merwe 2004	Chardonnnet 2002	IUCN 2006	Mesochina 2010
300	986	<1500	1300

Lions shared with Chad – a failed state

Lion threats

Disease	Illegal	PAC	Trophy	Poachin g	Livestoc k	Encroac h	Resource
No data	Heavy	None	Some	Heavy	Some	None	Some

Other CITES exports (2001-2009): Skins - 4

Summary: Unknown lion population, heavily affected by illegal killing, poaching of prey species heavy. 82% of people in CAR live on <\$2 per day, population heavily dependent on subsistence agriculture, ranks 8th on the ALERT list of failed states.

Conclusion: Trophy hunting unsustainable

Nigeria

No trophy hunting exports 2000-2009, last CITES export teeth in 2007

Country estimates

Bauer – Vd Merwe	Chardonnet	IUCN 2006
200	85	170

Lion threats

Disease	Illegal	PAC	Trophy	Poachin g	Livestoc k	Encroac h	Resource
No data	Some	None	None	Heavy	Some	Some	Some

Summary: Lions only found by Henshel et al (2010) in Lake Kainji (24 lions) and Yankari (15 lions).

Conclusion: Lions on the brink of extinction in Nigeria

Cameroon

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
20	6	9	1	10	19	16	5	3	12	101

Major importing countries: France 54%, USA 157%

Country estimates

Bauer – Vd Merwe 2004	Chardonnet 2002	IUCN 2006
260	415	360

Lions occur in Benoue Complex/ Gasahaka-Gumti, (200-300) 30% protected, and Waza (60) 100% protected. Recent investigations show Waza population near extinct (H. de Iongh, Leiden University)

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
No data	Heavy	None	Some	Heavy	Some	Some	Some

Other exports CITES exports (2000-2009): 1 live lion to South Africa

Summary: High rates of illegal killing, heavy poaching on lion prey species, declining lion population

Conclusion: Trophy hunting not sustainable, populations in significant decline

Congo

No trophy hunting exports 2000-2009, last CITES export trophy in 1984

Country estimates

Bauer – Vd Merwe 2004	Chardonnet 2002	IUCN 2006
0	60	<50

Surveys conducted by Henshel et al (2010) showed no lions exist in the Odzala area.

Conclusion: lions extinct in Congo

Ghana

No trophy hunting exports 2000-2009, last CITES export 2 live lions 2009

Country estimates

Bauer – Vd Merwe	Chardonnet	IUCN 2006
30	15	<220

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
No data	Some	None	None	Heavy	Some	Some	Some

Summary: No lions found by Henshel et al (2010) surveys of all areas where lions occurred in the past.

Conclusion: lions extinct in Ghana

Summary – country analysis of western and central Africa

Country	Lion numbers	Trophy hunting status
Burkina Faso 151 trophies 2000-2009	100-500 uncertain, shared with Benin	Bushmeat poaching, lions overhunted, highly unsustainable offtake
Benin 11 trophies 2000- 2009	100-500 uncertain, shared with Burkina Faso	Bushmeat poaching, lions hunted from populations of unknown numbers, unsustainable until populations can be assessed
Cote D'Ivoire No hunting 2000-2009	Previous estimates 30- 100	Lions extinct 2010
Central African Republic 57 trophies 2000- 2009	300-1500 very uncertain, shared with Chad	Failed state, high rates of bushmeat poaching, high rates of illegal lion killing, lion population unknown, trophy hunting not sustainable
Nigeria No hunting 2000-2009	Previous estimates 85- 200	High rates of bushmeat poaching, livestock encroachment, 2010 survey showed 39 lions, population heading to extinction
Cameroon 101 trophies 2000-2009	240-415, shared with Nigeria	High rates of bushmeat poaching, high rates of illegal lion killing, trophy hunting not sustainable, lion population in steep decline
Congo No hunting 2000-2009	Previous estimates 0-60	Lions extinct 2010
Ghana No hunting 2000-2009	Previous estimates 30- 220	High rates of bushmeat poaching, lions extinct 2010

B. Country by country trophy hunting assessment – southern Africa

Namibia

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
11	12	6	16	20	31	18	23	23	28	188

Major importing countries – USA 34%, Germany 15%, Poland 10%

Other CITES exports (2000-2009) include 45 skins, 19 skulls, 78 claws, and 30 teeth

Country lion estimates

Bauer – Vd Merwe 2004	Chardonnet 2002	IUCN 2006
910	691	415-795

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
Some	Some	Some	Some	Some	Some	None	Some

Summary – medium population size, largely in Etosha-Kunene area (55% protected), reasonably known population size, poisoning, problem animal control, livestock encroachment. Radiocollared lions hunted. Some hunting of females.

Lions shared with Botswana (see below)

Conclusion: Lions overhunted in concessions , unsustainable

Zimbabwe

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
95	101	105	107	94	90	63	47	43	61	806

Major importing countries – USA 58%, South Africa 8%, Spain 8%, Germany 4%

Other CITES exports (2000-2009) include 130 skins, 118 skulls, 426 claws, 15 teeth, and 107 live animals

Country lion estimates

Bauer – Vd Merwe 2004	Chardonnet 2002	IUCN 2006
1037	1686	Unknown for country, data overlap with populations in Botswana, South Africa, Zambia

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
Some	Some	Some	High	Some	Some	None	Some

Summary – medium population size, largely in Hwange, Mid Zambezi, Matusadona areas (~55% protected), reasonably known population size, poisoning, problem animal control, livestock encroachment. Hunting on borders of protected/photographic areas. Much corruption and overshooting of quotas. Some hunting of females.

Lions shared with Botswana, South Africa, Zambia (see below)

Conclusion: Lions grossly overhunted in concessions, lured out of national parks and photographic areas , corruption, overshooting quotas - highly unsustainable

Botswana

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
30	9	2	0	0	27	22	28	15	1	134

Major importing countries – USA 75%, South Africa 13%

NB – Botswana imposed lion hunting moratoria 2002-2004, and 2008 - present

Other CITES exports (2000-2009) include 286 skins, 8 skulls, and 4 live animals

Country lion estimates

Bauer – Vd Merwe 2004	Chardonnet 2002	IUCN 2006
2918	3207	Unknown for country, data overlap with populations in Zimbabwe, Namibia, South Africa

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
Medium	Some	Some	Small	Some	Some	None	Some

Summary – one of the largest populations in Africa, mainly in Chobe, Okavango, Kalahari. Populations largely in protected areas/ concessions. FIV strain infecting lions has been shown to be particularly virulent. Current moratorium might be permanent. Government moving to non-consumptive use of wildlife

Lions shared with Zimbabwe, Namibia, South Africa

Conclusion: Current and past moratoria on lion trophy hunting

Zambia

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
47	24	3	38	45	70	70	64	63	58	482

Major importing countries – USA 62%, South Africa 10%, Spain 6%

Other CITES exports (2000-2009) include 22 skins, 23 skulls, and 3 live animals

Country lion estimates

Bauer – Vd Merwe 2004	Chardonnet 2002	IUCN 2006
1500	3199	<600 - <1400

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
Medium	Some	Some	Medium	Some	Some	Medium	Some

Summary – medium population, large reserves in Luangwa, Kafue. Populations largely in protected areas/ concessions. One population listed by IUCN as <50 contains 3 lions (Liuwa Plains).

Lions shared with Zimbabwe, Malawi?

Conclusion: Trophy hunting pressure high, uncertain lion numbers, hunting along protected area boundaries, sustainability highly questionable

Mozambique

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
29	15	10	15	15	26	18	15	18	27	188

Major importing countries – USA 27%, South Africa 26%, Spain 22%

NB – Chardonnet 2009 reports offtake of 19 lions according to operators in 2007 and trophy fees paid for 22 lions 2008 – records kept by wildlife authority at variance with numbers shot.

Other CITES exports (2000-2009) include 29 skins, 27 skulls, 466 teeth

Country lion estimates

Bauer Vd Merwe 2004	Chardonnet 2002	IUCN 2006	Chardonnet 2009
400	955	<1300 - <1500	2700 provisional – includes lions shared with SA-Kruger/Limpopo

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
Some	Some	Some	Some	Some	Some	Medium	Some

Summary – medium population, concentration in northern Mozambique (Niassa).

Populations largely in protected areas/ concessions. High human population density, reserves suffered great faunal depletions during civil war. One population listed by IUCN as 100-250 lions contains perhaps 60 (Gorongosa/Marromeu). Some enforcement/penalties for shooting male lions <6yrs.

Lions shared with South Africa, Tanzania

Conclusion: Trophy hunting pressure medium on northern populations, proper population assessments crucial, better record keeping essential

South Africa

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
189	149	192	177	182	235	284	414	455	374	2651

Major importing countries – USA 71%, Spain 5%, China 3%, Germany 2%

Other CITES exports (2000-2009) include 628 claws, 71 feet, 56 live animals, 393 skins, 343 skulls, 149 teeth

Country lion estimates

Bauer – Vd Merwe 2004	Chardonnet 2002	IUCN 2006
2716	3852	>2130 - >2180

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
Medium	Some	Low	Unreliable	Some	Low	Low	Low

NB - South Africa is currently the biggest exporter of lion trophies and lion products. It is also the only African country actively breeding lions in large numbers (>4000 captive animals) to supply trophy hunting (so-called canned lion hunting). Corruption levels are high among CITES officials, professional hunters, and hunting operators. While the category selected for these CITES figures is “wild lions”, there is undoubtedly a high level of “leakage” of captive bred animals into the “wild” category as these can be sold to hunting clients at differential rates. Private game reserves allow trophy hunting also. By far the largest numbers of wild lions are protected within Kruger National Park (population >2000 animals), but hunting occurs in private concessions immediately bordering the reserve. Trophy lions are shot in neighbouring countries (Zimbabwe, Mozambique) and declared as South African trophies. Poaching of lions is expected to increase as South Africa allows a lion bone trade with Vietnam and Thailand for traditional medicine purposes – several arrests have been made at airports of smugglers carrying illegal lion bones.

Summary – Kruger National Park contains one of the largest lion populations in southern Africa. Concern is bovine tuberculosis that is spreading through the population with high mortality and morbidity. Lion populations only occur in fenced areas. Lions shared with South Africa, Tanzania

Conclusion: Trophy hunting pressure cannot be assessed, as captive bred lions are illegally substituted for wild trophies. South Africa has a small lion population outside reserves delivering 2651 “wild trophies” over ten years. This is reminiscent of the situation in Burundi where there was one resident elephant, but the country exported 2000 tons of ivory before the ban in trading. CITES is strongly advised to look into the matter of these lion exports from South Africa.

Summary – lion trophy hunting in southern Africa

Country	Lion numbers	Trophy hunting status
Namibia 188 trophies 2000-2009	691-910	Lion populations largely confined to Etosha National Park and surrounding areas. Lion offtake from concessions highly unsustainable
Zimbabwe 806 trophies 2000-2009	1037 - 1686	Lions grossly overhunted in concessions, lured out of national parks and photographic areas , corruption, overshooting quotas - highly unsustainable
Botswana 134 trophies 2000-2009	2918-3207	Lion hunting moratoria 2002-2005, 2008-present
Zambia 482 trophies 2000-2009	600-3199	Trophy hunting pressure high, uncertain lion numbers, hunting along protected area boundaries, sustainability highly questionable
Mozambique 188 trophies 2000-2009	400-2700 provisional; wildlife populations severely affected by civil war 1977-1992	Trophy hunting pressure medium on northern populations, proper population assessments crucial, better record keeping essential
South Africa 2651 trophies 2000-2009	2130 -3852; largely confined to Kruger National Park (>2000 lions). All lion populations fenced	Trophy hunting pressure cannot be assessed, as captive bred lions are illegally substituted for wild trophies. South Africa has a small lion population outside reserves delivering 2651 “wild trophies” over ten years. CITES is strongly advised to look into the matter of these lion exports from South Africa

C. Country by country trophy hunting assessment – eastern Africa

Tanzania

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
317	230	228	216	141	210	223	108	138	144	1955

Major importing countries – USA 47%, France 13%, Spain 10%, Mexico 6%

Other CITES exports (2000-2009) include 145 skins, 135 skulls

Country lion estimates

Bauer vd Merwe 2004	Chardonnet 2002	IUCN 2006	Mesochina 2010
7073	14432	>15400	16800

IUCN numbers shared with Kenya (Masai Mara, Tsavo)

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
Some	Some	Some	Heavy	Some	Some	Some	Some

Summary – Largest remaining lion population in Africa, substantial numbers occur outside protected areas. Considerable human and livestock conflict. Large (>200,000km²) areas set aside for hunting concessions. Annual quota established at 500 p.a., not achieved. Studies reveal 92% of failure to find trophies attributable to past overhunting. Lions as young as 2 yrs shot. Considerable corruption in assigning hunting concessions. No assessment of hunting pressure on concession populations. Most lions occur in protected areas – Serengeti for example. Newly introduced age minima for lions, uncertain enforcement.

Conclusion: Excessive quota allocation, lions overhunted in concessions , unsustainable

Ethiopia

Trophies exported

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
0	2	2	3	1	0	6	1	1	0	16

Major importing countries – USA 34%, Germany 15%, Poland 10%

Other CITES exports (2000-2009) include 45 skins, 19 skulls, 78 claws, and 30 teeth

Country lion estimates

Bauer – Vd Merwe 2004	Chardonnet 2002	IUCN 2006
1000	1477	<250 - <450

Lion threats

Disease	Illegal	PAC	Trophy	Poaching	Livestock	Encroachment	Resource
Some	Some	None	Low	Some	Medium	Medium	Medium

Summary: Highly uncertain lion populations, only in few areas, livestock and human encroachment

Conclusion: Low levels of trophy hunting, needs urgent population assessments to assess hunting impact

Summary – lion trophy hunting in eastern Africa

Country	Lion numbers	Trophy hunting status
Tanzania 1955 trophies 2000-2009	7073-16800	Excessive quota allocation, lions overhunted in concessions , unsustainable
Ethiopia 16 trophies 2000- 2009	<250 - 1477	Low levels of trophy hunting, needs urgent population assessments in hunting concessions