

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES  
OF WILD FAUNA AND FLORA



Fourteenth meeting of the Conference of the Parties  
The Hague (Netherlands), 3-15 June 2007

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Amendment of the annotation to the population of *Loxodonta africana* of Botswana to read as follows:

For the exclusive purpose of allowing in the case of the population of Botswana:

- 1) trade in hunting trophies for non-commercial purposes;
- 2) trade in hides for commercial purposes;
- 3) trade in leather goods for commercial purposes;
- 4) trade in live animals for commercial purposes to appropriate and acceptable destinations (and as determined by the national legislation of the country of import);
- 5) trade annually in registered stocks of raw ivory (whole tusks and pieces of not more than 8 tonnes) of Botswana origin owned by the Government of Botswana for commercial purposes only with trading partners that have been certified by the Secretariat, in consultation with the Standing Committee, to have sufficient national legislation and domestic trade controls to ensure that the imported ivory will not be re-exported and will be managed in accordance with the requirements of Resolution Conf. 10.10 (Rev. CoP12) concerning manufacturing and trade; and
- 6) trade in registered stocks of raw ivory (whole tusks and pieces of not more than 40 tonnes) of Botswana origin owned by the Government for commercial purposes on a one-off sale immediately after the adoption of the proposal. Botswana will trade only with trading partners that have been certified by the Secretariat, in consultation with the Standing Committee, to have sufficient national legislation and domestic trade controls to ensure that the imported ivory will not be re-exported and will be managed in accordance with the requirements of Resolution Conf. 10.10 (Rev. CoP12) concerning manufacturing and trade.

B. Proponent

Botswana

## C. Supporting statement

### 1. Taxonomy

- 1.1 Class: Mammalia
- 1.2 Order: Proboscidea
- 1.3 Family: Elephantidae
- 1.4 Genus, species or subspecies, including author and year: *Loxodonta africana* (Blumenbach, 1797)
- 1.5 Scientific synonyms: ---
- 1.6 Common names:
- |           |                    |
|-----------|--------------------|
| English:  | African elephant   |
| French:   | éléphant d'Afrique |
| Spanish:  | elefante africano  |
| Herero:   | Ondjou             |
| Sekalaka: | Zhou               |
| Setswana: | Tlou               |
- 1.7 Code numbers: CITES A115.001.002.001  
ISIS 5301415001002001001

### 2. Remarks

#### Botswana adheres closely to CITES

The Wildlife Conservation and National Parks Act of 1992, has in its fifth schedule, the Convention on International Trade in Endangered Species of Wildlife Fauna and Flora. Botswana has adopted the regulations pertaining to possession and ownership of ivory, these are termed the Wildlife Conservation (Possession and Ownership of elephant Tusks or Ivory) Regulations, 1999. This makes the Convention part of the national legislation and therefore provisions of the Convention are enforceable under the laws of Botswana.

#### Botswana is committed to contributing to monitoring systems

Botswana has contributed to both the interim reporting system for illegal killing and illegal trade in elephant products. Botswana continues to submit regular reports and has also undertaken to implement MIKE in line with decisions adopted at the 11th meeting of the Conference of the Parties (CoP11). Botswana has been submitting all MIKE reports timeously. Botswana also adheres to international standards of managing ivory stocks. To this end Botswana has adopted a computerised ivory management system that is being audited by TRAFFIC.

#### Experimental trade in ivory

Botswana has complied fully with requirements established by the Conference of Parties concerning trade in ivory. This is supported by the Secretariat's report (document 11.31.1) submitted at the 11th meeting of the Conference of the Parties and yet Botswana's attempt to regularize trade in Appendix-II listed populations within the context of CITES, including the establishment of an annual export quota for raw ivory, have been repeatedly refused at previous CoPs.

Furthermore, notwithstanding the establishment of highly restrictive requirements for one-off export quotas approved at CoP12, which have still not been authorized by the Standing Committee more than four years later, Botswana questions whether such procedures and requirements are necessary within the context of the conservation status of its elephant populations especially that over the years we have demonstrated our management capacities concerning conservation and regulation of trade. These conservation efforts have resulted in the elephant population of Botswana growing to three times larger than it was in 1989.

### 3. Unilateral statement by Botswana

#### a) Botswana's registered ivory and other elephant products

Only ivory and other elephant products from the elephant population of Botswana are included in this proposal.

#### b) A quota for registered stocks of raw ivory

The export quota refers only to the stock of both whole ivory tusks and pieces in the central ivory store, registered under the authority of the Department of Wildlife and National Parks. The Department will provide the CITES Secretariat with a list of ivory tusks and pieces earmarked for trade.

#### c) Ivory to be marked with a standard system

In accordance with Resolution Conf. 10.10 (Rev. CoP12) b) all whole tusks in the stockpile have been individually marked with punch dye and allocated a unique serial number in indelible ink. The marks are correlated with the register (database) entry showing area of origin and source. Pieces smaller than 1 kg and 20 cm in length will be weighed together in bags.

Ivory of unknown origin or coming outside Botswana is kept separate from Botswana stockpile and are not included in the requested sale.

#### d) Sale through one single centre

All ivory sales and subsequent packaging and dispatch will take place only at a secure place with ample working space selected by the Department of Wildlife and National Parks.

#### e) Number of ivory shipment limited

For ease of monitoring and control, there will be a maximum of two shipments of ivory after the sale.

#### f) Direct export of ivory to importing country

Where possible export permits will allow direct shipments to the importing country or countries.

#### g) Importing countries to have internal controls and to agree not to re-export

The importing countries should have internal controls and make a commitment not to re-export.

#### h) Independent monitoring

Enforcement personnel from the CITES Secretariat, or Parties agreed to in advance by Botswana and the CITES Secretariat, may be present at the time of sale, packaging, and shipment process to check all details and inventory. Similar inspection may take place when the containers are unloaded and the tusks distributed in the importing country. Access to the central ivory store is guaranteed to CITES Secretariat staff.

#### i) Use of revenue

All revenue accruing from sale of ivory will be used for conservation (monitoring, research, law enforcement, etc.) activities plus the development activities of communities living adjacent to the elephant ranges. A Trust Fund account has already been opened.

#### 4. Rationale for this proposal

It is important to continue to trade in raw ivory because:

- a) African elephants are in competition with people and protected areas are inadequate to ensure the survival of elephants, especially in arid and semi-arid areas, where elephants depend on resources and space that are also used by people. Climatic and other environmental variables require that elephants remain mobile and opportunistic, and make confinement to particular reserves impractical as well as detrimental. Due to the foregoing it is essential that elephants are incorporated into local economies through complementary range of use options such as tourism, hunting, and international trade in all elephant derivatives. It does not make any conservation nor economic sense if an Appendix-II listing precludes trade in the most valuable derivatives from the listed populations.
- b) The Wildlife Conservation Policy of 1986 clearly recognises that if no value is attached to wildlife resources, the imperatives of other land uses will inadvertently militate against the continued existence of wildlife resources in reasonable numbers. The conflicts between elephants and human beings attendant to a growing elephant population in Botswana, in the long run, may disadvantage the former if the communities living side by side with elephants are not benefiting.
- c) It might not be possible to get cooperation from communities in ensuring that conservation objectives are met, if communities feel that conservation is only a net cost to them, and our communities will increasingly express such sentiments as long as trade in elephant products especially ivory is halted. Elephant has a potential to generate more revenue through diversified utilisation, and such revenues will be reinvested into conservation to strengthen elephant management programmes and will further assist with reducing the conflicts between humans and elephants.
- d) Trade in elephant products is essential to the conservation of elephants, its habitat and other species. Furthermore, it is important for satisfying basic human needs in the elephant range. People/elephant conflicts are growing and the view by the communities is that elephants are a pest. Elephant products such as ivory picked up from the communal areas could increase the value of elephants to those communities and this can only result in the community appreciating elephants more. With this benefits accruing to them directly, communities will increasingly feel that they have a stake in the continued existence of elephants in reasonable numbers. From the last auction of 1999, pursuant to the Decision 10.1, 30 % of proceeds have been set aside for communities living adjacent to the elephant range with the rest earmarked for elephant conservation.
- e) A principle was established in Agenda 21 and the Biodiversity Convention that every country has the right to use their natural resources to their best advantage. Botswana hereby makes an application to have that right accorded to it in respect of its elephant population. The preamble of the CITES Convention also recognises that people and States are and should be the best protectors of their own wild fauna and flora.
- f) There are costs associated with storing and stock piling ivory. The ever-increasing stockpiles of ivory mainly from natural mortality have compelled the Government to construct a more secure storeroom which was completed in February 2006 at a cost of USD 2 million. The costs of administering and ensuring security of ivory stock is estimated at USD 75,000 per annum.

#### D. Biological data

##### 1. Distribution

###### 1.1 Historical

Campbell (1990) reports that Botswana contained more surface water in the past than today. Elephants being a water-dependent species are reported to have had a much wider distribution then. From accounts of early European explorers, Campbell concludes that elephant distribution

was at its recorded maximum in the late 18th century. The drying of the Kgalagadi water sources, the spread of human settlements and, in particular, excessive hunting for ivory in the 1800s were thought to have contributed to reducing elephant population to a minimum around 1890. During this period, it is reported that small concentrations of a few thousand animals remained only in the vicinity of the Okavango Delta, the western Chobe and Linyanti - Kwando Rivers in the north and the Tuli Block in the east of Botswana.

Child (1968) and Sommerlatt (1976) described elephant concentrations appearing along the eastern section of the Chobe River and southwards in the Chobe District by the mid-1960s. These observations suggest a re-occupation of parts of the former elephant range in northern Botswana which had been abandoned by the turn of the century.

## 1.2 Current

The current distribution patterns and population estimates of elephants are derived from aerial surveys which form part of animal census program started in 1987 and which has been ongoing since except for the years 1993, 1997, 1998 and 2000. Elephant distribution in the larger northern elephant range is determined by availability of surface water. During the wet season, water is normally available in the whole elephant range consisting of a contiguous area of about 80,000 km<sup>2</sup>, which has a number of seasonal pans.

Dry season distribution is noticeably concentrated along the perennial water sources of the Kwando-Linyanti-Chobe river systems on the Botswana/Namibia boundary. This concentrations must overlap into Namibia this time. There are small concentrations along the Zimbabwean border which is contiguous with populations on the other side, as there are no barriers to movement. The other concentrations are found in the western edges of the Okavango Delta.

Elephants are present in the Northern Tuli Block throughout the year though a few of these regularly cross a short way into Zimbabwe's Tuli Circle and occasionally into South Africa.

## 2. Population

The Botswana elephant population estimates stand at 154,658 individuals as depicted in the 2006 aerial survey report prepared by Department of Wildlife and National Parks. The African elephant account for about 50 % of the total large wild herbivore biomass of Botswana. The population continue to grow at a rate of approximately 5 % per annum. There is a definite upward trend in the elephant population of Botswana. It might be worth restating that the elephant range in the northern part of Botswana has been expanding westward into areas of the Okavango where elephants had not been seen in many years.

## 3. Habitat

Within the northern elephant range, there are five broad habitat types, as defined by the dominant tree species present, riverine woodland (including Chobe/Linyanti Rivers and the Delta system), acacia woodland, *Colophospermum mopane* woodland, *terminalia/burkea* woodland and *Baiekaia plurijuga* woodland. Various combination of these categories also occur, with mixed dominance of the major species.

Concern has been expressed over elephant impact on these habitat types, particularly the riverine, by a variety of researchers since the 1960s (Child 1968, Sommerlatte 1976, Simpson 1978, Moroka 1984). Currently studies are on-going on elephant/habitat interaction in Moremi and the Chobe.

As a consequence of observations that the structure of the riverine vegetation is being drastically modified by the high elephant concentrations during the dry season, the elephant management plan (officially referred to as the "Conservation and Management of Elephants in Botswana) which was adopted by the Botswana Parliament in 1991, prescribed among other management actions, the provision of artificial watering points in a bid to spread out elephants. In addition, culling of elephants, to keep the elephant population at the 1990 level of 54,600, was to be embarked upon under that plan. These strategies were meant to mitigate impact of elephants on vegetation. However, culling was never done. It should further be highlighted that the elephant management plan

is under review, this was made possible in part by the proceeds from the ivory auction sale conducted in 1999.

In the Tuli Block, in the central eastern Botswana, where the elephant densities of 0.75 to 1.0/km<sup>2</sup> are comparable to the northern Botswana, the habitat is dominated by *mopane* and there is concern over the conversion of woodland to thicket scrubland.

#### 4. Geographic trends

Geographical range of elephants in Botswana has been expanding in recent years. The current elephant range, especially in northern Botswana, is still expanding with elephants moving into previously unused areas such as the western Okavango Delta. 99 % of the total elephant population of Botswana occurs within the area of approximately 80,000 km<sup>2</sup> in the northern Botswana, but there are increasing conflicts on the fringes of the area.

#### 5. Role of the species in the ecosystem

Elephants play a significant role at the ecosystem level, and are capable of greatly modifying their own habitat and consequently the habitat of other species. Elephants may displace other species such as rhinos and ungulates such as roan antelope in situations where surface water is limited, as elephants completely dominate water holes during droughts. At low densities, elephants impacts promote species richness and biodiversity. In wooded areas, at low densities, elephants open up thickets creating pathways for other species and promoting growth of grasses. At higher densities thickets are destroyed and trees knocked down, encouraging growth of grasses and changing species composition of the ecosystem.

Local overabundance in elephant concentrations in protected areas has impacted on the biodiversity of such areas. Some tree species have disappeared in sensitive riverine habitats. The Chobe riverfront is home to the rare Chobe bush-buck (*Tragelaphus scriptus ornatus*). There are concerns that the numbers of this rare antelope have declined as a consequence of the continued rapid change of its restricted habitat by elephants. The Chobe is also home to the rare species of sable (*Hippotragus niger*) and roan (*H. equinus*). The elephant, which has a wide range of food, is believed to compete with these animals for forage. The felling of trees by elephants potentially could affect certain bird species, which nest at particular levels.

#### E. Utilisation of elephants

##### 1. National utilization

The principal form of utilisation of the elephant in Botswana is through recreational or sport hunting. A limited quota of eighty (80) bulls approved by CITES was introduced in 1996 and a further quotas of eighty-seven (87) bulls for 1997, one hundred and sixty-eight (168) bulls for 1998, one hundred and seventy four (174) bulls for 1999. One Hundred and eighty (180) in 2000, one hundred and eighty (180) in 2001 and two hundred and ten (210) in 2002, 2003, 2004, 2005 and two hundred and seventy (270) in 2006. This is after a self-imposed ban on elephant hunting that started in 1983. The off-take is less than 0.2 % of the total population and this should have no effect on the elephant population. Elephant hunting provides a good source of revenue for community-managed wildlife areas. This is important because it is these communities who bear the cost of living side by side with elephants. Ivory from recreational hunting is kept as trophy by the hunters.

The elephant tusks available in the Department storage facilities are mainly a result of natural mortality as well as managed activities such as problem animal control (PAC) and confiscation from illegal hunters. There are some fifty one (51) tonnes of ivory in government storage to date. Of these eight (8) tonnes, comprise of some tusks and ivory pieces, from outside Botswana or of unknown origin and poached ivory.

##### 2. Trade in elephant hides and related products

Botswana would like to continue collecting hides and trade them for the benefit of the Botswana and elephant conservation.

### 3. Legal international trade

The last ivory auction was held in April 1999 as an experimental export of 17,170.5 kg to Japan. In the CITES report of the 42nd meeting of the Standing Committee held in Lisbon, Portugal, the CITES Secretariat confirmed that trade had taken place successfully and that Botswana and other trading parties had fully complied with precautionary undertaking. Revenue accrued from this auction was deposited in a Trust Fund and is used to benefit elephant conservation directly together with development programs of communities living adjacent to the elephant range.

### 4. Live specimens

Botswana traded in 30 live animals with South Africa in 1998. Botswana has also donated 300 live animals to the Republic of Angola for the purpose of repopulating the Kissama National Park. To date only 20 elephants have been captured from the Tuli Block area. Family groups were translocated to avoid disruption of structures of families. Another 500 elephants have been offered to Mozambique to repopulate the Gorongosa National Park. Arrangements are being worked on to move the elephants to Gorongosa.

### 5. Illegal trade

Illegal trade in Botswana is low and has been in the decline since 1989.

The decline in the numbers of elephants being poached after 1989 is attributed to the formation of the highly specialised and trained Anti Poaching Unit (APU), within the Department of Wildlife and National Parks in 1989. The unit currently has a staff complement of 200 staff. The unit has access to one (1) departmental Cessna 206 aircraft and a helicopter. Boats are also provided in areas such as the Okavango and Chobe to the APU.

The APU's efforts have over the years been complemented by Botswana Defence Force (BDF), the Police and their Intelligence Units. The BDF has soldiers deployed in Anti-Poaching work throughout the country with the majority based in the elephant range at any given time.

Courses have for some time been and continue to be offered for sister department, such as Customs and Excise on what animal trophies cannot be exported without permit. These courses also enlighten those departments on matters relating to CITES. The combined efforts of the country's law enforcement agencies have done a good job in deterring poaching or keeping it at a very low level, especially for species like elephants.

### 6. Actual or potential trade impact

The absence of trade in elephant products is seen as the greatest threat to elephant survival in southern Africa. In Botswana, elephant populations have grown from about 34,000 to 154,658 since 1983. Government's suspension of elephant hunting in 1980s was an initiative that showed that Botswana is conscious of the conservation of its wildlife resources. A recent example that could be cited is the Wildlife Conservation (restriction to the killing of lions and cheetahs as problem animals) order 2000, which came into effect on 10 November 2000, while strategies for their conservation are being worked on. In addition, it has been established that conflicts between people and elephants is rising due to the ever-increasing elephant population. As stated previously, there is a westward expansion of the elephant range in the Okavango Delta area. This is resulting in crop depredation and even loss of human life in this area. People are running out of patience and it is not uncommon to hear in the news citizens accusing government of caring more for wildlife than humans. These sentiments militate against conservation in the long run, unless something tangible accrues to the people from the resource.

A lot of people believe that any legal trade will encourage illegal trade. Illegal trade continues and if it is not replaced by legal trade, it will grow. That is the real threat.

## 7. Ivory stocks

The current status (as of 23 October 2006) of Botswana's ivory stock is summarized in the table below.

Source of ivory	Number of tusks	Weight
Problem Animal Control	1,400	14,916.51
Picked Ivory	6,010	30,823.01
Poached Ivory	1,188	8,816.00
Total	8,610	54,570.62

## F. Conservation and management

### 1. Legal status

#### 1.1 National

Elephants in Botswana occur in two major regions of the country, namely, what is commonly called the northern range within Botswana and the Tuli Block. The northern population constitutes about 99 % of the overall population with the rest occurring in the Tuli Block (see Annex 1). The northern range consists of an area about 80,000 km<sup>2</sup>. This area includes two national parks, a game reserve, wildlife management areas, and forest reserves. The area is also within what is referred to as the Buffalo fence, which is a stock free zone. National Parks provide the highest level of legal protection. No killing of elephants is done within national parks except where human life is threatened.

### 2. Species management

#### 2.1 Population monitoring

As alluded to above, a program to monitor elephant population was initiated after the ban in elephant hunting of 1983. Aerial surveys are one of the monitoring tools used to monitor the elephant population. Between 1987 and 1995 aerial surveys were conducted twice in a year, that is, during the wet and dry seasons, covering the whole northern elephant range by a highly qualified team. Currently the surveys are conducted once every year during the dry season with no surveys conducted in 1993, 1997, 1998 and 2000.

#### 2.2 Habitat conservation

National Parks under the Wildlife Conservation and National Parks Act of 1992 are declared "for the propagation, protection and preservation therein of wild animal life, vegetation and objects of geological, ethnological, archaeological, historical or other scientific interest for the other scientific interest for the benefit and advantage and enjoyment of the inhabitants of Botswana". In a bid to further conserve elephant habitat and to maintain biodiversity, the Government of Botswana came up with the "Conservation and Management" of Elephant in Botswana in 1991 which is currently being reviewed by African elephant specialists. One of the Management issues to come out of the policy was to keep the northern elephant population at the 1990 level.

Fire is another significant cause of habitat change in northern Botswana. Attempts to mitigate fire impacts are through construction of firebreaks. In the event of fires, the whole community in an area is expected to participate in controlling any such out-breaks.

#### 2.3 Management measures

At present elephants are utilized through a limited quota. It is however, important to note that the quota is so minute as not to have any effect on the population currently growing at the rate of about 5 % per annum.



Problem animal control is another management operation undertaken. As a result of the growing elephant population, there have been increased conflicts with human beings. Elephants that are a threat to human life and property are destroyed.

#### 2.4 International trade

The following mechanisms are in place to control international trade in hunting trophies of elephants. At the port of exit, CITES and other permits are checked by Customs and Excise. In case of doubt, Customs have been advised to call on the Department of Wildlife and National Parks officers to assist and provide expert advice.

Presentations are regularly made to Customs officials from around the country on CITES procedures. During the courses it is pointed out that Customs officials can confiscate trophies pending identification by DWNP personnel. Permits for raw ivory are issued in Gaborone. Three field stations, namely Francistown, Kasane and Maun are authorised to issue export and import permits for trophies from recreational hunting of elephants. The Department of Animal Health and Production issues veterinary health certificates only on production of a valid CITES permit from DWNP.

#### 2.5 Domestic measures

Botswana marks its ivory according to the requirements of CITES using a two-letter code plus a third letter which is an internal code denoting the origin of the tusk within the country, last two digits of the year, the serial number and the weight of the tusk. For example, BWJ 02/15 20.3 indicate that the ivory is from Maun and is the fifteenth (15) tusk received in 2002 weighing 20.3kg. Ivory is marked soon after it has been brought to the storage facility. It is worth mentioning that temporary marking is done in the field when ivory is picked.

Stringent legislation, Wildlife Conservation and National Parks Act of 1992, has deterrent penalties for lawbreakers. According to the laws of Botswana, any person convicted of an offence involving the unlawful possession of or trading in ivory shall be liable to a fine of BWP 50,000 (USD 8,150) and to imprisonment of ten (10) years.

#### G. Information on similar species

The Asian elephant (*Elephas maximus*) is the only other extant proboscidean. It is listed in Appendix I of the Convention. The proponent believes that with the precautionary measures adopted, it is not likely that this proposal to continue to trade in ivory will prejudice the survival of the Asian elephant.

#### H. Comments from countries of origin

Not applicable as only the population of Botswana is involved in the proposal.

#### I. References

Campbell, A. C. (1990). History of Elephants in Botswana in: P. Hancock (ed), The Future of Botswana's Elephants. Kalahari Conservation Society, Gaborone. Pp.5 - 15.

Child, G. (1968). Report to the Government of Botswana on an Ecological Survey of Northeastern Botswana. FAO Report No. TA 2563, Rome.

DWNP (1991). The Conservation and Management of Elephants in Botswana. Department of Wildlife and National Parks, Ministry of Commerce and Industry, Republic of Botswana. Government Policy Paper, 13pp.

DWNP (1999) Results of the 1999 wet season survey.

DWNP (1989-2006) DWNP Aerial survey reports

Government of Botswana (1992). Wildlife Conservation and National Parks Act, 1992. Act No. 28 of 1992.

Moroka D.N. (1984). Elephant Habitat Relationship in Northern Botswana. Report to the Department of Wildlife and National Parks. Government Printer, Gaborone, Botswana p. Simpson, C.C. (1978). Effects of Elephants and Other Wildlife on the Vegetation Along the Chobe River, Botswana. Occasional Papers, The Museum Texas Tech University, 48:1-15.

Protocol on Wildlife Conservation and law enforcement, Southern African Development Community

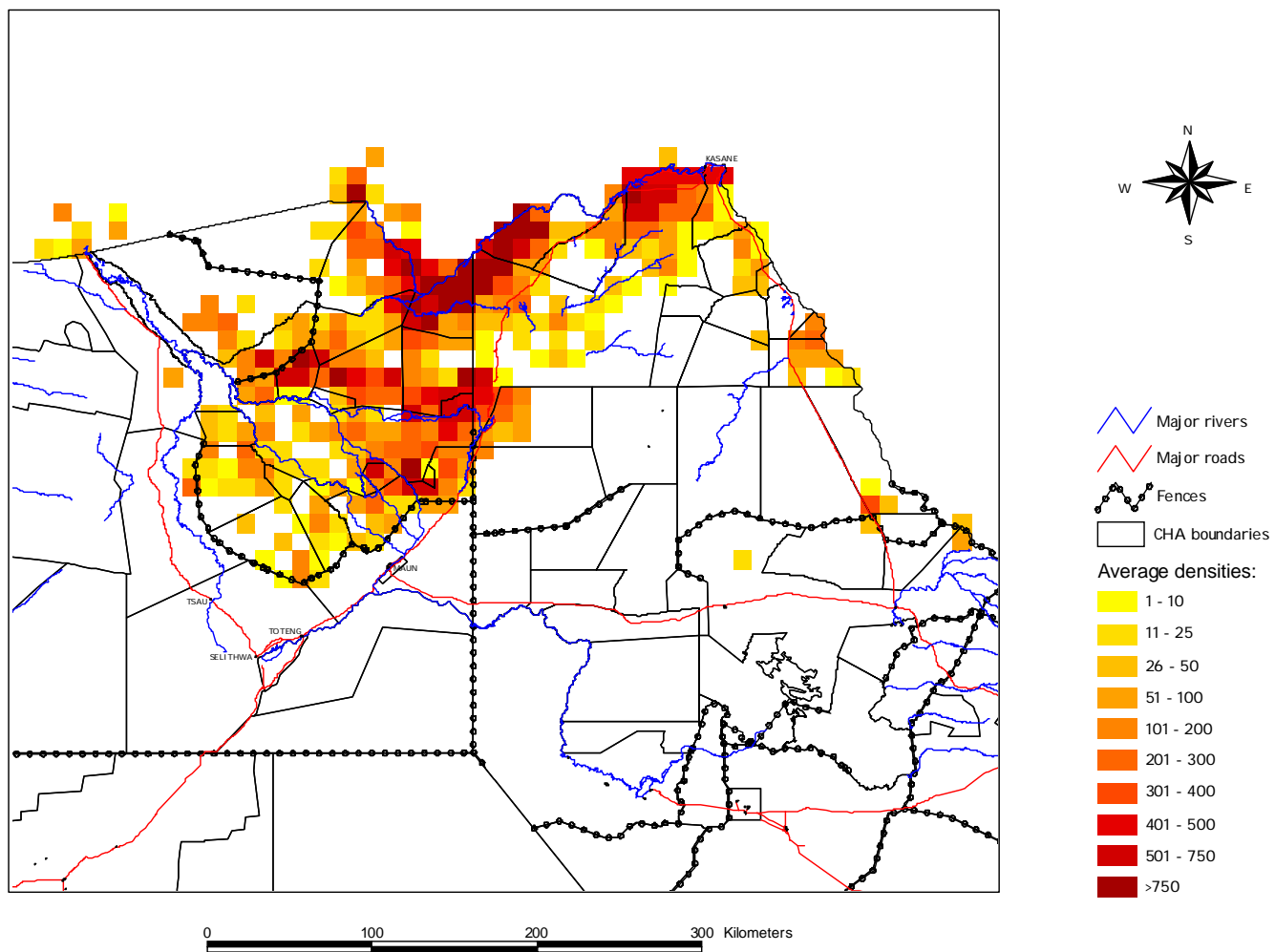
Sommerlatte, M. W. L.(1976). A Survey of Elephants in Northeastern Botswana.UNDP/FAO Project Bot 72/020, Field Document No. 2, Government Printer Gaborone.

ELEPHANT POPULATION ESTIMATES

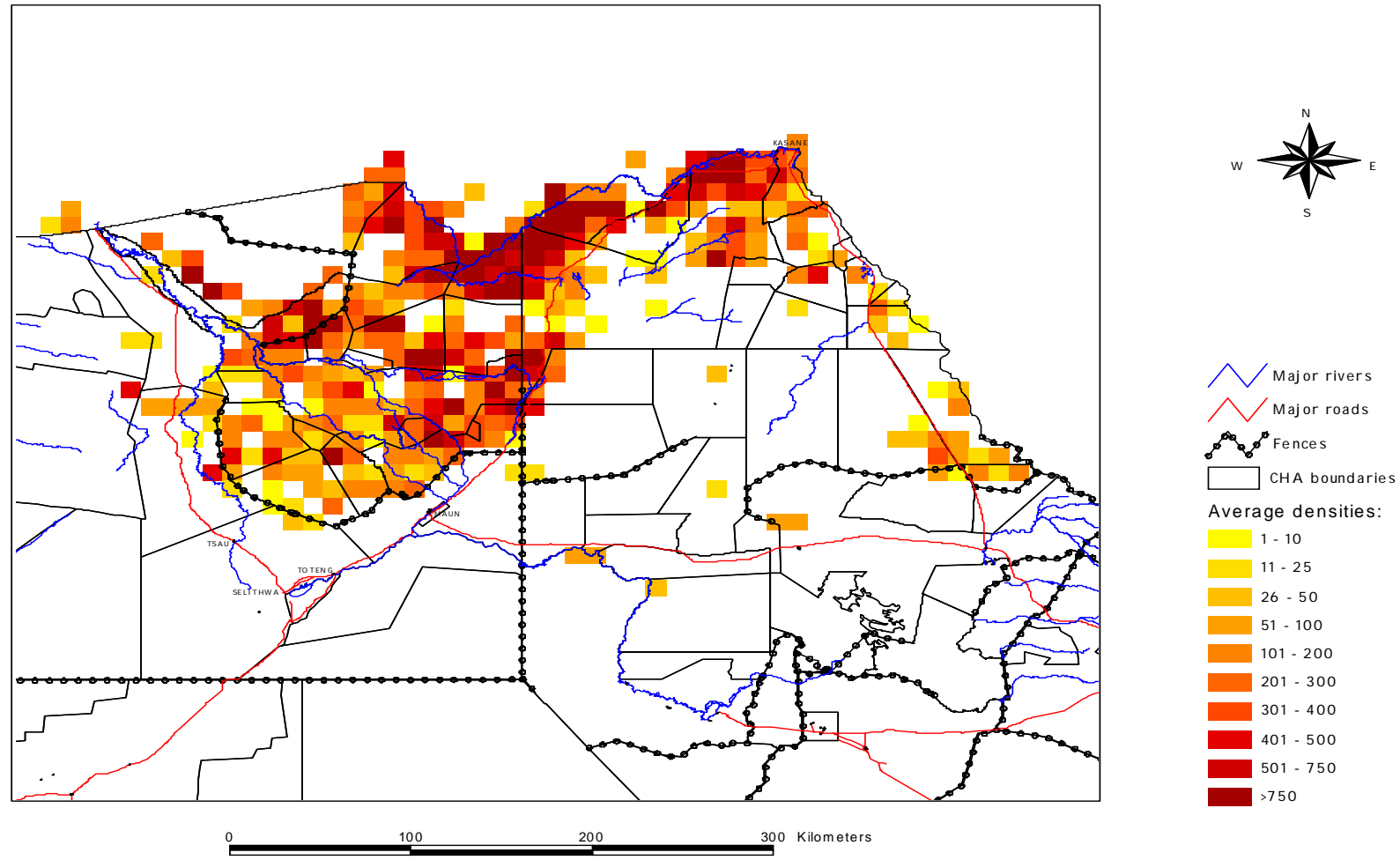
As part of wildlife management, the Department of Wildlife conducts annual countrywide censuses. These surveys provide vital information of the population trends of various wildlife species including elephants. Elephant population estimates from 1989 to 2006 are provided below. The 2005 survey was not complete, so the estimates for 2005 have been omitted.

<b>Year of survey</b>	<b>National population</b>	<b>Population in MIKE site</b>
1989	54 596	14 881
1990	58 011	12 574
1991	62 518	14 881
1992	52 815	8 911
1994	79 153	11 970
1995	75 196	14 267
1996	99 425	27 289
1999	115 690	21 530
2001	116 988	33 219
2002	123 152	31 598
2003	109 471	30 348
2004	151 000	32 263
2006	154 658	39 404

### Dry season elephant distribution (Average of 1992, 93, 94 and 95 surveys)



### Dry season elephant distribution (Average of 1996 and 1999 surveys)



2003 DRY SEASON ELEPHANT DISTRIBUTION IN NORTHERN BOTSWANA

