## A. Proposal

**It is proposed that the South African population of the African elephant (*Loxodonta africana*) be downlisted from Appendix I to Appendix II subject to:**

a) trade in raw ivory under an experimental quota of a maximum of 30 tonnes of whole tusks of government owned stock originating from the Kruger National Park, subject to the provisions as set out in Res. Conf. 10.10; Decision 10.1 and Doc. SC.41.6.4 (Rev. 2)
b) trade in live animals for re-introduction purposes into protected areas formally proclaimed in terms of legislation of the importing country
c) trade in hides and leather goods
d) trade in hunting trophies for non-commercial purposes
e) all other specimens shall be deemed to be specimens of species in Appendix I and the trade in them shall be regulated accordingly

## B. Proponent

Republic of South Africa

## C. Supporting statement

1. Taxonomy

1.1 CLASS: Mammalia
1.2 ORDER: Proboscidea
1.3 FAMILY: Elephantidae
1.4 GENUS, SPECIES, AND SUBSPECIES: *Loxodonta africana africana*
1.5 SCIENTIFIC SYNONYMS: None
1.6 COMMON NAME: African elephant

(Ansell (1974) recognizes four subspecies of African elephant of which *L. a. africana* occurs in the southern African subregion.)

2. Biological Parameters

2.1 Distribution

In former times elephants ranged through most of South Africa but today they are confined to protected areas (Table 1). An increasing number of privately owned reserves have re-introduced elephant populations.

2.2 Habitat availability

The habitat available to elephants in South Africa has been considerably expanded in recent years, and there are good prospects for yet further expansions. Expansion of the range through the acquisition of land is an option being pursued by South African National Parks (SANP) as well as establishing new populations on private land.

Possible alternatives for increasing the range of elephants would be establishment of transfrontier conservation areas with amongst others Mozambique and Zimbabwe.

2.3 Population status

Table 1 shows the status of the most important elephant populations in South Africa.

2.4 Population trends

South Africa's elephant population recovered from a low point of 120 animals in 1920 to more than 12 000 today (Table 1). The translocation of live elephants from the Kruger

National Park to other protected areas has been promoting an increase in the elephant metapopulation in South Africa in recent years. Trends in the largest population, that of the Kruger National Park (KNP) is shown in Table 3. The population in the Addo Elephant National Park is increasing at an annual rate of nearly 5% per year.

2.5 Geographic trends

The translocation of elephants from the well-established population in the Kruger National Park to other protected areas has resulted in an increase in the geographical spread of elephant populations in South Africa (Table 2; Figure 1). The total area of protected areas where elephants are found currently exceeds 27 000 km² (Table 1).

2.6 Role of the species in its ecosystem

Changes caused by elephants to the composition and structure of the vegetation are well documented (Owen-Smith 1988). Within the confines of fenced reserves high elephant densities may result in losses of certain plant species. In the Kruger National Park, tree species with soft trunks, such as the baobab (*Adansonia digitata*) and the Common Star-Chestnut (*Sterculia rogersii)*, appear to be particularly vulnerable to elephant damage and there is concern that if the elephant population is allowed to grow without control these species will disappear. In the Addo Elephant National Park a number of endemic succulent plant species are only present within the so-called botanical reserves from which elephants are permanently excluded (Moolman and Cowling 1994). Control of elephant populations to avoid deleterious impacts on biodiversity has been a controversial subject, however, a broad consensus has been reached that population manipulation is needed where elephant movement is inhibited by fences or surrounding human disturbances.

2.7 Threats

Elephant populations in South Africa's protected areas are under no major threat and statistics show that poaching in South Africa is well under control. For example (Figure 2) shows poaching incidences in Kruger National Park. The sudden onslaught in 1981, when a total of 102 animals were recorded as having been killed for their ivory, led to the immediate initiation of various successful counter operations. As a result poaching of elephants declined sharply from 1982 to 1984 and has remained low since then (figure 2).

3. Utilization and Trade

3.1 National Utilization

Substantial numbers of live elephants from the Kruger National Park have been traded in the past, mainly for the purpose of establishing populations in protected areas (Table 2 and Figure 1).

Within South Africa utilization of elephant products is limited. Hides and ivory from the stockpile in the Kruger National Park are occasionally sold to local dealers. For ivory sales records are kept of the tusk number, its weight, date of sale and the buyer. Over the past four years an average of 70kg of ivory has been sold per year from the KNP stockpile.

3.2 Legal International Trade

South Africa's elephant population is on Appendix I, so there is currently no legal international trade in ivory or hides. Table 2 shows the numbers of elephants that have been sent to southern African and overseas countries from the Kruger National Park between 1980 and 1999.

3.3 Illegal Trade

The amount of illegal trade in ivory from South Africa is difficult to assess because not all seized ivory originates from South Africa. The illegal hunting of elephant in the Kruger National Park is currently not a significant problem (Figure 2).

3.4 Actual or potential trade impacts

South Africa proposes that the transfer of its elephant population from Appendix I to Appendix II be subject to conditions similar to those governing the downlisting of the populations of Botswana, Namibia and Zimbabwe decided at the Tenth Conference of the Parties, namely:

- the transfer should include specifications limiting the types and quantities of products that could be traded;
- an initial experimental quota of raw ivory will be set, and the effects of trade will be monitored;
- subsequent exportation of raw ivory will be subject to approval of CITES;
- exports of raw ivory will be restricted to stocks of whole tusks of certifiable national origin, and which has been marked and registered in accordance with CITES procedures;
- ivory which was confiscated or is of unknown origin will not be eligible for export;
- trade in ivory will be with only one importing country;
- the export of ivory from South Africa will take place through a single government-controlled centre;
- all net revenues from the sale of ivory will be used for projects that promote the conservation of elephants.
- a CITES panel of experts will review the suggested conditions and set any further conditions that may be necessary to minimize any potential negative impacts of the trade.

A further recommendation is that international trade in live elephants from South Africa will only take place to formally proclaimed protected areas in terms of legislation of the importing country.

South African National Parks proposes to use the revenue generated from the sale of products from the Kruger National Park stockpile for:

- Monitoring and research necessary to implement the new elephant management program in the Kruger National Park (described in section 4.2.3 below). This program will help to determine best practice in the management of elephant populations in protected areas, and will have wide applications.

- Increased monitoring and control of illegal hunting of elephants, particularly intelligence networks.

- The acquisition of land to promote the conservation of elephants in other national parks in South Africa, including transfrontier national parks. As indicated above, this program is vitally important to create protected areas that are sufficiently large for elephants to be re-established in parts of their former range.

3.5 Captive breeding or artificial propagation for commercial purposes

Captive breeding plays no role in the conservation of the African elephant.

## 4. Conservation and Management

### 4.1 Legal status

#### 4.1.1 National

The African elephant is protected in terms of the National Parks Act and Provincial legislation.

#### 4.1.2 International

As a signatory to CITES, South Africa abides by the conditions applicable to a CITES Appendix I species, as is currently the case with the African elephant.

### 4.2 Species management

4.2.1 Population monitoring

In most of the publicly owned protected areas aerial censuses are conducted at least once a year. The larger elephant populations in South Africa are closely monitored by this means, and long term trends have been reliably established. Results from the Kruger National Park are shown in Table 3.

#### 4.2.2 Habitat conservation

In South Africa it is feasible to maintain elephants only within the confines of fenced protected areas. Within these areas the maintenance of the natural habitat is a priority. Various management measures, for example fire management and control of large herbivore populations, are routinely undertaken to prevent habitat degradation.

#### 4.2.3 Management measures

Management of elephant populations has focused on population reduction to avoid habitat degradation and loss of biodiversity. The rationale behind this has been the subject of debate, and there is a need to place elephant culling on a firmer scientific basis.

In the Kruger National Park elephant damage to the vegetation became noticeable during the 1960s and an annual culling program commenced in 1967. The policy was to maintain about 7 000 elephants in the park, but fluctuations between 6 000 and 8 000 were deemed to be acceptable. In 1994-1995 debates with various animal rights groups led to an undertaking by South African National Parks to revise the culling programme. In 1995 culling was ceased and the population has increased as a result (Figure 3; Table 3).

A revised elephant management plan has been approved by SANP and will be implemented during the year 2000 (Whyte *et al.* 1999). The new plan is not based on the idea of a static elephant population and encourages fluctuations in time and space. The overall aim is to maintain the biodiversity characteristic of the park, in all its facets and fluxes. Elephant numbers will be managed in accordance with measured impacts on biodiversity rather than absolute numbers of elephants.

The detailed elephant management plan for the Kruger National Park is available on the SANP web site *www.parks-sa.co.za.*

### 4.3 Control measures

#### 4.3.1 International trade

The Endangered Species Protection Unit of the South African Police, the provincial nature conservation agencies and SANP cooperate closely to control illegal dealing in ivory. The Endangered Species Protection and CITES Implementation Act, currently in preparation, will enhance the efficiency of law enforcement.

#### 4.3.2 Domestic measures

Control of elephant populations would be undertaken mainly in publicly owned protected areas. In these areas population control is conducted only to maintain habitat quality and biodiversity and not for the sake of generating income. Offtake is most unlikely to reach unsustainable levels.

References

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Owen-Smith, R.N. 1988. Megaherbivores: The influence of very large body size on ecology. Cambridge University Press, Cambridge.

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Table 1: Major protected areas in South Africa with populations of African elephants. SANP = South African National Parks.

| PROTECTED AREA | SURVEY YEAR | AREA ($KM^2$) | NUMBER OF ELEPHANTS | SOURCE |
|---|---|---|---|---|
| Kruger National Park | 1999 | 19624 | 9152 | SANP Unpublished. |
| Makuya National Park | 1997 | 165 | 8 | Barnes et al. In press. |
| Letaba Ranch | 1997 | 420 | 58 | Barnes et al. In press. |
| Marakele National Park | 1998 | 450 | 60 | SANP Unpublished. |
| Atherstone Nature Reserve | 1997 | 136 | 24 | Barnes et al. In press. |
| Manyeleti Game Reserve | 1997 | 228 | 28 | Barnes et al. In press. |
| Madikwe Nature Reserve | 1998 | 700 | 282 | Barnes et al. In press. |
| Pilanesberg National Park | 1997 | 553 | 87 | Barnes et al. In press. |
| Tembe Elephant Park | 1997 | 300 | 115 | Barnes et al. In press. |
| Pongolapoort Nature Reserve | 1997 | 119 | 20 | Barnes et al. In press. |
| Itala Nature Reserve | 1997 | 297 | 45 | Barnes et al. In press. |
| Mkuzi Game Reserve | 1997 | 380 | 25 | Barnes et al. In press. |
| Hluhluwe-Umfolozi Park | 1997 | 965 | 250 | Barnes et al. In press. |
| Addo Elephant National Park | 1998 | 513 | 305 | SANP Unpublished. |
| Phalaborwa Mining Co. | 1997 | 41 | 42 | Barnes et al. In press. |
| Klaserie Private Nature Reserve | 1999 | 628 | 226 | Whyte pers. comm. [1] |
| Umbabat Private Nature Reserve | 1999 | 144 | 79 | Whyte pers. comm. |
| Timbavati Private Nature Reserve | 1999 | 784 | 331 | Whyte, pers. comm. |
| Sabie Sand Game Reserve | 1999 | 572 | 497 | Whyte, pers. comm. |
| Private Reserves | 1997 | - | 659 | Barnes et al. In press. |
| Vhembe-Dongola (developing national park) | 1999 | - | Vagrants enter from Botswana (maximum 20-30) | SANP Unpublished. |

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Table 2. Numbers of live elephants translocated from the Kruger National Park from 1980 to 1999. RSA = Republic of South Africa; BOT = Botswana; NAM = Namibia; SWA = Swaziland; ZIM = Zimbabwe; OS = Overseas.

| YEAR | RSA | BOT | NAM | SWA | ZIM | OS | TOTAL |
|---|---|---|---|---|---|---|---|
| **1980** | 14 | 0 | 0 | 0 | 0 | 34 | 48 |
| **1981** | 25 | 0 | 0 | 0 | 0 | 28 | 53 |
| **1982** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **1983** | 32 | 0 | 13 | 0 | 0 | 0 | 45 |
| **1984** | 10 | 0 | 72 | 0 | 0 | 0 | 82 |
| **1985** | 67 | 0 | 19 | 0 | 0 | 2 | 88 |
| **1986** | 9 | 0 | 0 | 0 | 0 | 0 | 9 |
| **1987** | 44 | 0 | 33 | 18 | 0 | 0 | 95 |
| **1988** | 44 | 0 | 0 | 0 | 3 | 0 | 47 |
| **1989** | 69 | 0 | 15 | 0 | 0 | 0 | 84 |
| **1990** | 71 | 7 | 7 | 0 | 0 | 0 | 85 |
| **1991** | 103 | 0 | 25 | 0 | 0 | 4 | 132 |
| **1992** | 122 | 3 | 5 | 0 | 0 | 0 | 130 |
| **1993** | 124 | 2 | 0 | 0 | 0 | 10 | 136 |
| **1994** | 204 | 0 | 0 | 19 | 0 | 2 | 225 |
| **1995** | 39 | 1 | 0 | 0 | 0 | 10 | 50 |
| **1996** | 164 | 0 | 0 | 0 | 0 | 0 | 164 |
| **1997** | 70 | 0 | 0 | 0 | 0 | 0 | 70 |
| **1998** | 63 | 0 | 0 | 0 | 0 | 0 | 63 |
| **1999** | 20 | 0 | 0 | 0 | 0 | 0 | 20 |
| **TOTAL** | 1294 | 13 | 189 | 37 | 3 | 90 | 1626 |

Table 3. The growth of the elephant population in the Kruger National Park from 1903 to 1999. Note: population estimates made before 1967 are less reliable, and are believed to be underestimates of the actual populations at the time.

| Year | Estimate | Type of count |
|---|---|---|
| 1903 | 0 | Estimate |
| 1905 | 10 | Estimate |
| 1908 | 25 | Estimate |
| 1925 | 100 | Estimate |
| 1931 | 135 | Estimate |
| 1932 | 170 | Estimate |
| 1933 | 200 | Estimate |
| 1936 | 250 | Estimate |
| 1937 | 400 | Estimate |
| 1946 | 450 | Estimate |
| 1947 | 560 | Estimate |
| 1954 | 740 | Estimate |
| 1957 | 1 000 | Estimate |
| 1960 | 1 186 | Aerial survey |
| 1962 | 1 750 | Fixed-wing survey |
| 1964 | 2 374 | Helicopter count |
| 1967 | 6 586 | Helicopter count |
| 1968 | 7 701 | Helicopter count |
| 1969 | 8 312 | Helicopter count |
| 1970 | 8 821 | Helicopter count |
| 1971 | 7 916 | Helicopter count |
| 1972 | 7 611 | Helicopter count |
| 1973 | 7 965 | Helicopter count |
| 1974 | 7 702 | Helicopter count |
| 1975 | 7408 | Helicopter count |
| 1976 | 7 257 | Helicopter count |
| 1977 | 7 715 | Helicopter count |
| 1978 | 7 478 | Helicopter count |
| 1979 | No census | |
| 1980 | 7 454 | Helicopter count |
| 1981 | 7 343 | Helicopter count |

| Year | Estimate | Type of count |
|---|---|---|
| 1982 | 8 051 | Helicopter count |
| 1983 | 8 678 | Helicopter count |
| 1984 | 8 273 | Helicopter count |
| 1985 | 6 887 | Helicopter count |
| 1986 | 7 617 | Helicopter count |
| 1987 | 6 898 | Helicopter count |
| 1988 | 7 344 | Helicopter count |
| 1989 | 7 468 | Helicopter count |
| 1990 | 7 278 | Helicopter count |
| 1991 | 7 470 | Helicopter count |
| 1992 | 7 632 | Helicopter count |
| 1993 | 7 834 | Helicopter count |
| 1994 | 7 806 | Helicopter count |
| 1995 | 8 064 | Helicopter count |
| 1996 | 8 320 | Helicopter count |
| 1997 | 8 371 | Helicopter count |
| 1998 | 8 869 | Helicopter count |
| 1999 | 9 152 | Helicopter count |

Figure 1. Destinations of elephants translocated from the Kruger National Park. NP = Northern Province; MPL = Mpumalanga; GP = Gauteng Province; NW = North West Province; FS = Free State; KZN = KwaZulu-Natal; NC = Northern Cape; EC = Eastern Cape; WC = Western Cape.

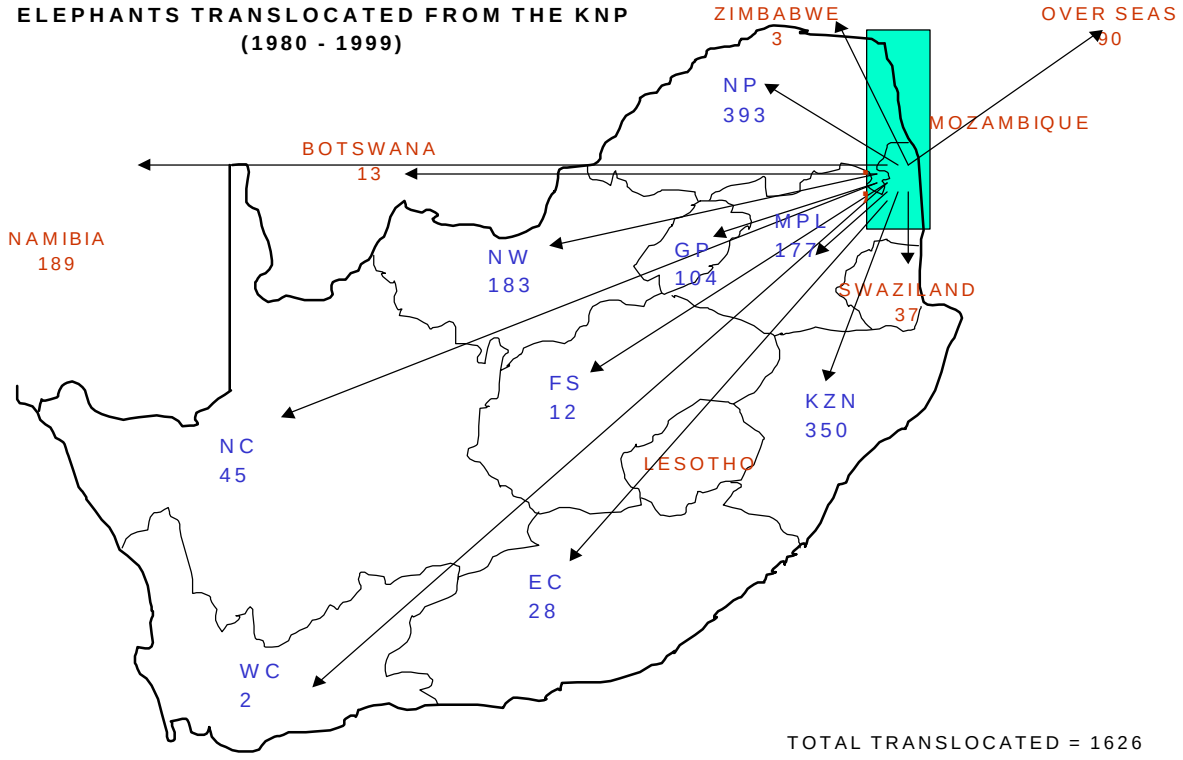

Figure 2: Records of elephant poaching in the Kruger National Park from 1980 to 1999.

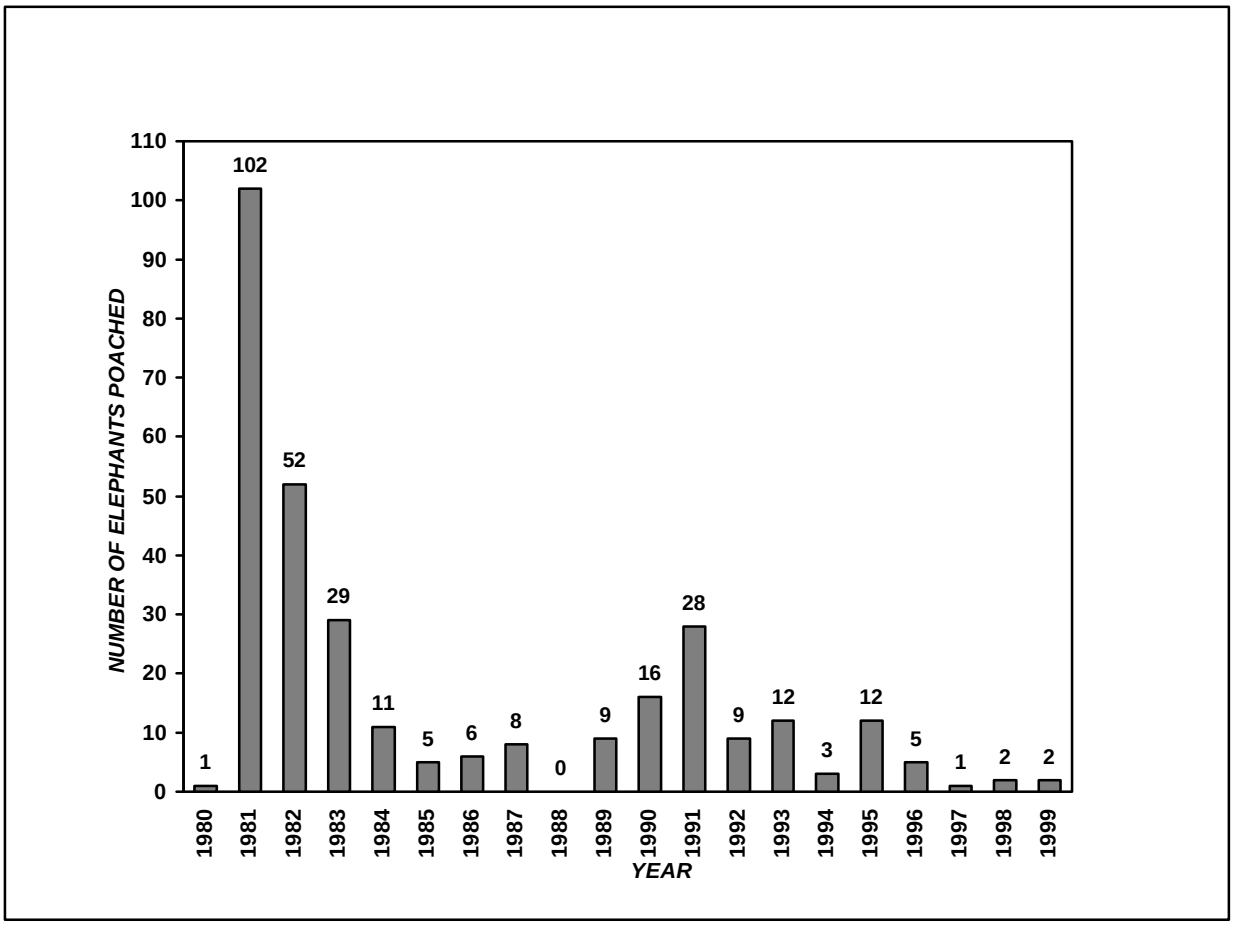

Figure 3. Numbers of elephants culled in the Kruger National Park from 1980 to 1999.