

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



Seventeenth meeting of the Conference of the Parties  
Johannesburg (South Africa), 24 September – 5 October 2016

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

1. The inclusion of all populations of *Loxodonta africana* (African elephant) in Appendix I through the transfer from Appendix II to Appendix I of the populations of Botswana, Namibia, South Africa and Zimbabwe.
2. This amendment is justified according to the following criteria under Annex 1 of Resolution Conf. 9.24 (Rev. CoP16), Criteria for amendment of Appendices I and II:

"C. A marked decline in population size in the wild, which has been either:

- i) observed as ongoing or as having occurred in the past (but with a potential to resume);  
or
- ii) inferred or projected on the basis of any one of the following:
  - levels or patterns of exploitation;
  - high vulnerability to either intrinsic or extrinsic factors"

B. Proponent

Benin, Burkina Faso, Central African Republic, Chad, Ethiopia, Kenya, Liberia, Mali, the Niger, Nigeria, Senegal, Sri Lanka and Uganda<sup>2</sup>:

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:

<sup>1</sup> This document has been provided in these languages by the author(s).

<sup>2</sup> The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.

1.6 Common names: English: African elephant  
French: éléphant d'Afrique  
Spanish: elefante africano

1.7 Code numbers: CITES A-115.001.002.001 (1984(1))  
ISIS 5301415001002001001

## 2. Overview

3. This proposal seeks to unify African elephants and their range States in one listing that offers maximum protection under CITES in the face of the threat posed by the unsustainable demand from the ivory trade, so that all range States come together in strategies to remove threats to their survival and send a clear message to the world. Countries in West, Central and Eastern Africa have already experienced intense pressure from ivory poachers, while Southern Africa is also now experiencing the depredations of criminal syndicates. This proposal is therefore a call to make a stand for the survival of elephants throughout Africa, extending our hands to our brothers and sisters in the Southern African range States<sup>3</sup> to join with the rest of the continent in a united, cohesive mission to fight against extinction of elephants. In the words of a Swahili proverb, "Unity is strength, division is weakness."
4. With reference to criterion C for the proposed amendment (noted in section A above), there has been a marked decline in elephant populations across the whole of Africa (some 15% between 2006 and 2013 according to the African Elephant Database (AED), detailed in Section **Error! Reference source not found.** below). Widespread declines occurred during the intense poaching of the 1970s and 1980s (criterion C.i), followed by a period of relative stability and in some areas growth in the 1990s and early 21<sup>st</sup> century<sup>4</sup>. With the rise in poaching, the declines have resumed and – unless urgent action is taken – are projected to continue (criterion C.ii) on the basis of both the unsustainable levels of exploitation and the high vulnerability of elephant populations due to *intrinsic factors* (the high demands for protection and enforcement set against the limitations of capacity in many African countries) and *extrinsic factors* (the high demand for ivory in destination countries, and the ability of criminal networks to operate and meet this demand).
5. The illegal killing of elephants for the ivory trade is widespread across Africa and endangering the survival of the African elephant species. According to CITES Secretariat press releases issued on 23 March 2015 and 3 March 2016, the threat to elephant populations persists<sup>5</sup>: *“estimated poaching rates overall remain higher than the normal growth rate of elephant populations. Therefore, the elephant population at MIKE sites overall is likely to have continued to decline in 2015.”*<sup>6</sup>. More details on elephant population size and trends are given in sections **Error! Reference source not found.** and **Error! Reference source not found.** below.
6. The listing of all African elephants in Appendix I in 1989 sent a clear signal to the world. Ivory markets collapsed and the ivory price crashed, immediately ending the prevailing poaching crisis and allowing elephant populations to recover. The weakened protection of elephants and exemptions for legal trade since 1997 have not slowed poaching; if anything, they stimulated a renewed illegal trade in the face of increasing demand, particularly after the second sale, once again threatening the species with extinction. The 9-year ‘moratorium’ on trade in ivory from Appendix II elephant populations, in effect since 2008, has also failed to prevent the killing. It will end in 2017, one year after CoP17; by nature a time-bound temporary measure, it will have signalled to traffickers and consumers that sales may be allowed after it ends. There have been various high level initiatives in recent years, both by range and consumer countries, but they too have failed to reverse the overall decline.

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<sup>3</sup> The elephant populations of Botswana, Namibia, South Africa and Zimbabwe are currently included in Appendix II, for the exclusive purpose of allowing trade in hunting trophies, live animals, hides, hair, leather goods, "ekipas" (ivory carvings) incorporated in finished jewellery (Namibia), and ivory carvings (Zimbabwe), both for non-commercial purposes, and a one-off sale of raw ivory from government-held registered stocks (that took place in 2008).

<sup>4</sup> UNEP, CITES, IUCN, TRAFFIC (2013) *Elephants in the Dust – The African Elephant Crisis. A Rapid Response Assessment*. United Nations Environment Programme, GRID-Arendal. Accessible at: [www.grida.no](http://www.grida.no)

<sup>5</sup> CITES Press Release Geneva/Kasane, 23 March 2015: *Elephant poaching rates virtually unchanged in 2014 - CITES MIKE programme says that elephant populations continue to decline owing to steady poaching trends*. Accessible at: [https://cites.org/eng/mike\\_figures2014](https://cites.org/eng/mike_figures2014); CITES Press Release Geneva/New York/Nairobi, 3 March 2016: *African elephants still in decline due to high levels of poaching*. [https://cites.org/eng/news/pr/african\\_elephants\\_still\\_in\\_decline\\_due\\_to\\_high\\_levels\\_of\\_poaching\\_03032016](https://cites.org/eng/news/pr/african_elephants_still_in_decline_due_to_high_levels_of_poaching_03032016)

<sup>6</sup> *Ibid.*, CITES Press Release Geneva/New York/Nairobi, 3 March 2016.

7. The proponents consider that listing ALL African elephant populations in Appendix I is the only way to send an unambiguous message that elephants are protected globally, and that buying ivory is unacceptable.

### 3. Species characteristics

#### 3.1 Distribution

8. There are 37 countries in sub-Saharan Africa with elephant populations. Of the two main taxa (see section 3.3 below), savanna elephants are found primarily in Eastern Africa (8 countries) and Southern Africa (9 countries), with forest elephants living mainly in the Congo Basin of Central Africa (7 countries). West Africa (13 countries) has both savanna and forest elephants, with some uncertainty over the exact taxonomic status of individual populations in areas of distribution overlap.

9. The geographical extent and trends of elephant range areas are described in section 4.5 below. Elephant populations in West Africa are distributed in small patches of highly fragmented habitat; while available habitat is more continuously distributed in Central, Eastern and Southern Africa, fragmentation is becoming an increasing problem in all regions.

10. The countries where elephants occur in Southern Africa are: Angola, Botswana, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe

#### 3.2 Habitat

11. African elephants occupy a wide range of habitats, from near-desert in Namibia and Mali, through various types of semi-arid savanna ecosystem across much of the continent, to tropical forests in Central Africa.

12. In Southern Africa, the species occupies *Acacia* and miombo savanna, and near-desert in north-western Namibia.

#### 3.3 Biological characteristics

13. There are two distinct taxa of the African elephant, a savanna form and a forest form. Many authorities consider them to be separate species<sup>7</sup>, although this distinction has not been recognised yet by the African Elephant Specialist Group<sup>8</sup>. The latter are concerned about the problem of distinguishing populations of the two taxa in zones of overlap and/or potential hybridization. For this reason, CITES also recognises a single African species in its Identification Manual<sup>9</sup>. In Southern Africa, only the savanna form is present, with a desert-adapted variety in north-western Namibia identified by some observers<sup>10</sup>.

#### 3.4 Role of the species in its ecosystem

14. African elephants play a keystone role in shaping the structure of woodlands and savanna, creating spatial heterogeneity and landscape-level diversity, dispersing seeds and facilitating access to water for a range of other species. The loss of such keystone megafauna from ecosystems could have profound and long-lasting negative effects on ecological structure and function<sup>11</sup>. When confined by artificial barriers such as fences or land use blocking movement corridors, this habitat modification

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<sup>7</sup> Rohland, N., Reich, D., Mallick, S., Meyer, M., Green, R.E., Georgiadis, N.J., Roca, A.L. & Hofreiter, M. (2010) Genomic DNA sequences from mastodon and woolly mammoth reveal deep speciation of forest and savanna elephants. *PLoS Biol* 8(12): e1000564. doi:10.1371/journal.pbio.1000564

<sup>8</sup> <http://www.iucnredlist.org/details/12392/0>

<sup>9</sup> <http://citeswiki.unep-wcmc.org/IdentificationManual/tabid/56/ctl/sheet/mid/369/currentTaxaID/12392/currentTaxaType/Species/currentKingdom/0/sheetId/659/language/en-US/Default.aspx>

<sup>10</sup> <http://www.desertelephantconservation.org/AboutDesertElephants.html>

<sup>11</sup> Barnosky, A.D., Lindsey, E.L., Villavicencio, N.A., Bostelmann, E., Hadly, E.A., Wanket, J. & Marshall, C.R. (2015) Variable impact of late-Quaternary megafaunal extinction in causing ecological state shifts in North and South America. *Proceedings of the National Academy of Science*. Accessible at: <http://dx.doi.org/10.1073/pnas.1505295112>

role may be seen as locally excessive in relation to the conservation of desirable plant and animal species<sup>12</sup>.

#### 4. Status and trends

##### 4.1 Habitat trends

15. Habitat loss, through conversion of forest and savanna to forestry concessions, plantation and subsistence agriculture and settlement, and through blocking of movement paths and corridors by such converted habitat and by roads, is the most significant long-term threat to elephant populations. The African Elephant Database notes a steady loss of elephant range in all regions (see Section 4.5 below), including Southern Africa (particularly Zimbabwe), although it also points out that changes to date cannot distinguish between contraction in true elephant range and changes/ improvements in the way range is estimated. Estimates of range change/ contraction are more meaningful when estimated on national or more local scales.

##### 4.2 Population size

16. The primary source of data on elephant range areas and population sizes is the African Elephant Database (AED)<sup>13</sup>, a collation of individual surveys from a variety of sources maintained by the IUCN/ SSC African Elephant Specialist Group (AfESG). The AED tends to be conservative; reports are screened and scrutinised by a data quality working group/ taskforce. Four categories of reliability have been used in its reporting since they were defined in 1995<sup>14</sup>: Definite, Probable, Possible and Speculative in order of decreasing rigour and reliability. Reports from the AED are issued at irregular intervals, depending largely on the availability of funding: the first was in 1995, followed in 1998, 2002 and 2007. The data categories were elaborated in the 2007 report. At the time of writing, the most recent update of the AED was online on 31 December 2013.
17. Data for savanna elephant populations that will be directly comparable on an Africa-wide basis are starting to come in from The Great Elephant Census (GEC)<sup>15</sup>, a continent-wide programme of aerial surveys funded by the Paul G Allen (Vulcan) Foundation and working in collaboration with national governments and a variety of NGOs. While some results from the GEC have been released during its operation, a full set of data will be made available in time for CoP17, which should also inform the AfESG in producing an up-dated status report before CoP 17.
18. The estimate for total elephant numbers in Africa in the 'Definite' and 'Probable' categories, according to the evidence reported in the AED as available by 31 December 2013, was 473,386. The totals for the four regions were: Central Africa – 59,587 (12.6% of all African elephants); Eastern Africa – 102,303 (21.6%); Southern Africa – 301,052 (63.6%); West Africa – 10,444 (2.2%).
19. For the four Appendix II countries, the corresponding 2013 total was 266,014. This combined population, composed of national numbers (Botswana 154,271, Namibia 16,555, South Africa 20,260, and Zimbabwe 74,928) for the four countries alone now represents some 56% of the continental total, because of more dramatic declines in the other regions<sup>16</sup>. These estimates are likely to be updated as the results from the GEC become available.

##### 4.3 Population structure

20. Both the mean age and the social structure of elephant populations are disrupted by poaching for ivory, which targets the oldest adult animals with the largest tusks, the matriarchs and large males<sup>17</sup>. Such selective killing results in the removal of the key social focus among the surviving members of

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<sup>12</sup> van Aarde, R.J. & Jackson, T.P. (2007) *Megaparks for metapopulations: Addressing the causes of locally high elephant numbers in southern Africa. Biological Conservation*, 134: 289–297.

<sup>13</sup> <http://www.elephantdatabase.org/>

<sup>14</sup> Said, M.Y., Chunge, R.N., Craig, G.C., Thouless, C.R., Barnes, R.F.W. & Dublin, H.T. (1995) *African Elephant Database 1995. IUCN, Gland, Switzerland*. 225 pp.

<sup>15</sup> <http://www.greatelephantcensus.com/>

<sup>16</sup> SC66 Doc. 47.1

<sup>17</sup> Cobb, S. & Western, D. (1989) *The ivory trade and the future of the African elephant. Pachyderm*, 12: 32-37.

elephant societies<sup>18</sup>; the cohesive roles of older females may be compensated somewhat by younger survivors<sup>19</sup> but since the oldest females are the repositories of knowledge of social relationships and ecological hazards and rewards, their loss affects the survival chances of entire families<sup>20</sup>. The removal of the most successful adult bulls is likely to increase reproductive skewness and reduce genetic diversity in the surviving populations<sup>21</sup>. The negative effect of drastic depletion of both females and male elephants on genetic diversity has been well documented in Uganda<sup>22</sup>, which suffered massive losses during the 1970s-80s poaching crisis.

#### 4.4 Population trends

21. The AfESG notes in the most recent update of the AED that, because of methodological issues, trends of decline in countries within regions may be masked by changes in the form and quality of surveys between years and the possibility that additional elephant numbers estimated in surveys of some areas may compensate for the reductions elsewhere.
22. While recent declines have been notable across all regions of Africa, the intensity of declines is uneven, with "hotspots" identified in Central Africa (DRC, Chad, Gabon), Eastern Africa (Tanzania) and Southern Africa (Mozambique), and low rates of decline in other countries (Uganda). In West Africa, the populations of elephants are isolated and generally low, and it is difficult to determine significant trends. The relative stability in some populations has masked trends of decline at regional scales in datasets such as the AED, which as noted receives data from a range of surveys using differing methodologies.
23. The AED results indicate that the recorded number of elephants in Definite and Probable categories in Central Africa has changed little since 2006. However, since surveys of new populations were added to the total numbers in the more recent dataset, a steady total suggests that a substantial decrease in individual populations is likely, with large areas still remaining unsurveyed. Repeated estimates have shown evidence of marked declines in key national populations, i.e. Chad (-76.5%), and Gabon (-55.5%).
24. A separate compilation and modelling of independent survey data for Central Africa<sup>23</sup> has shown that for forest elephants "population size declined by ca. 62% between 2002–2011, and the taxon lost 30% of its geographical range."
25. In Eastern Africa, there has been a significant decline during 2006-2013 according to AED data, primarily in Tanzania (-53.5%). The region now holds some 22% of the continental Definite/ Probable total.
26. The AED indicates that Southern Africa now has some 64% of the continent's "Definite/ Probable" elephants. Even so, the region as a whole experienced a decline during 2006-2013 of some 5%. While some countries showed an apparent increase, others stabilized and those of Zambia and Zimbabwe had declines of 45% and 18% respectively.
27. Despite the conservative nature of the AED, it notes a decline in the total number of African elephants (in its Definite and Probable categories) by about 15% from 555,823 in 2006 to 473,386 in 2013, stating "This decline appears to be a genuine reduction in a number of populations counted using consistent techniques, particularly in Tanzania, Chad, Zambia and Zimbabwe." These declines have

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<sup>18</sup> Gobush, K.S., Mutayoba, B.M., & Wasser, S.K. (2008) Long-term impacts of poaching on relatedness, stress physiology, and reproductive output of adult female African elephants. *Conservation Biology*, 22: 1590-1599.

<sup>19</sup> Goldenberg, S.Z., Douglas-Hamilton, I., & Wittemyer, G. (2016) Vertical transmission of social roles drives resilience to poaching in elephant networks. *Current Biology*, 26:1-5

<sup>20</sup> McComb, K., Moss, C., Durant, S.M., Baker, L., & Sayialel, S. (2001) Matriarchs as repositories of social knowledge in African elephants. *Science*, 292, 491–494.

<sup>21</sup> Archie, E.A. & Chiyo, P.I. (2012) Elephant behaviour and conservation: social relationships, the effects of poaching, and genetic tools for management. *Molecular Ecology*, 21:765–7

<sup>22</sup> Nyakaana S., Abe E.L., Arctander P. & Siegismund H.R. (2001) DNA evidence for elephant social behaviour breakdown in Queen Elisabeth National Park, Uganda. *Animal Conservation*, 4: 231-237.

<sup>23</sup> Maisels F, Strindberg S, Blake S, Wittemyer G, Hart J, et al. (2013) Devastating decline of forest elephants in Central Africa. *PLoS ONE*, 8(3): e59469.doi:10.1371/journal.pone.0059469

been attributed<sup>24</sup> primarily to poaching for ivory, with habitat loss and fragmentation due to land use change and competition by people posing both immediate and longer-term threats.

28. An independent analysis published in 2014<sup>25</sup> of trends across Africa, using a study population in central Kenya to provide data for modelling of poaching in other populations with known PIKE (Proportion of Illegally Killed Elephants) values, produced an estimate of a 3% reduction in the continental population for the single year 2011, with unsustainable rates of offtake continuing to 2013.
29. Although official results from the GEC are still to be announced for many countries, some preliminary information indicates significant declines.
30. In Tanzania<sup>26</sup>, the national elephant population appears to have declined by 60% since 2009, with higher losses in the important Malagarasi-Muyovosi (81%), Ruaha-Rungwa (76%) and Selous-Mikumi (66%) ecosystems. These survey results were unexpectedly dramatic in the Ruaha area and a second survey of a slightly larger area around Ruaha in 2015<sup>27</sup> gave a higher population estimate, and lower rate of decline (54%); nevertheless, the rate of decline is still of great concern. In June 2014 UNESCO placed the Selous Game Reserve on the List of World Heritage in Danger because of the decimation of wildlife by poaching, especially elephants and rhinos<sup>28</sup>.
31. In contrast to results reported in the AED up to 2013, the more recent GEC results<sup>29</sup> indicate Mozambique's elephant population has been reduced by poaching by almost 50% in the past five years, with some key areas in the northwest of the country experiencing declines of over 60%.
32. In Zambia, where GEC-assisted surveys in September 2015<sup>30</sup> found the population total may be stable, but with large differences between different parts of the country. The surveys suggest the country's two largest populations, in the Luangwa and Kafue ecosystems, are stable or possibly increasing, but in the Lower Zambezi area bordering Zimbabwe elephant numbers are falling, and in Sioma-Ngwezi National Park on the border with Angola and Namibia, elephant populations have declined by about 95% since 2004<sup>31</sup>.
33. For the four Appendix II countries, the AED currently shows an overall decline of some 5% from 2006 to 2013. Trends of increase were reported in the relatively small populations of Namibia and South Africa, but these were offset by the stabilization of previously growing numbers in Botswana and the suggestion of a decrease of some 18% in Zimbabwe. A summary of surveys released recently in Zimbabwe<sup>32</sup> reports a nationwide decline of some 7% from 2001 to 2014, with much higher rates of decrease in the north, and stable or increasing numbers in the northwest and south of the country.

#### 4.5 Geographic trends

34. The total range area (in two defined categories, 'Known' and 'Possible') across Africa reported by the end of 2013 in the AED was nearly 32% smaller than in 2002, which was itself an 8% decrease from the 1998 estimate. It is suggested that a large part of this apparent contraction is due to better information. Indeed, in 2013 some 68% of the total reported range was considered to be in the

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<sup>24</sup> SC66 Doc. 47.1 (2016) Annex 1.

<sup>25</sup> Wittemyer, G., Northrup, J., Blanc, J., Douglas-Hamilton, I., Omondi, P., & Burnham, K. (2014), *Illegal killing for ivory drives global decline in African elephants*. PNAS, vol. 111 no. 36. Accessible at: <http://www.pnas.org/content/111/36/13117.abstract>

<sup>25</sup> [https://cites.org/eng/mike\\_figures2014](https://cites.org/eng/mike_figures2014).

<sup>26</sup> Nyalandu, L. (2015) *Wildlife Census Results for Elephant Populations in Tanzania, 2014*. Press Release Issued by Hon. Lazaro Nyalandu, MP, Minister for Natural Resources and Tourism, 1st June, 2015, Arusha

<sup>27</sup> <http://www.stzelephants.org/census-results-ruaha-rungwa/>

<sup>28</sup> <http://whc.unesco.org/en/news/1150/>

<sup>29</sup> <http://www.greatelephantcensus.com/blog/2015/5/30/government-of-mozambique-announces-preliminary-census-results>

<sup>30</sup> <http://www.greatelephantcensus.com/blog/2016/3/2/zambia-census-announced-luangwa-and-kafue-stable-lower-zambezi-and-sioma-ngwezi-see-decline>

<sup>31</sup> DNPW (2016) *Report on the 2015 Aerial Survey in Zambia. Volume 1: Population Estimates of African Elephants (Loxodonta africana) in Zambia*. Department of National Parks and Wildlife, Chilanga, Zambia. Accessible at: <http://www.nature.org/ourinitiatives/regions/africa/explore/documenting-zambias-elephants.xml>

<sup>32</sup> ZPWMA (2014) *Preliminary Report on Aerial Survey of Elephants and other Large Herbivores covering the Zambezi Valley, Sebungwe Region, North West Matabeleland and Gonarezhou National Park: 2014*. Zimbabwe Parks and Wildlife Management Authority, December 2014.

'Known' category, with 32% in the 'Possible' category; the corresponding figures for 2002 were only 35% Known and 65% Possible. However, despite the caveats over drawing quantitative conclusions about the rate of range loss, it does appear safe to accept that there has been a steady trend of decline over time in the range available for elephants.

35. As noted above in section 4.1, the loss of habitat through land conversion is a significant long-term threat to elephant populations. At the same time, it does appear that pressure from poaching has, in many areas particularly tropical forests of Central Africa, either eliminated entire elephant populations or reduced population densities to very low levels<sup>33</sup>.
36. Elephant Database range data for Southern Africa indicate that there was a regional decline of some 23% 'Known and Possible' range from 2002 to 2013.
37. For the four Appendix II countries, the decrease was 9%; increases were seen in Botswana (1%) and South Africa (4%), with a very slight decrease in Namibia (0.3%) and a more substantial decrease in Zimbabwe (32%). The elephants' range over the four countries now covers just over 350,000 km<sup>2</sup> (Botswana 100,253 km<sup>2</sup>, Namibia 146,904 km<sup>2</sup>, South Africa 30,651 km<sup>2</sup>, Zimbabwe 76,930 km<sup>2</sup>)<sup>34</sup>. Summaries of elephant range issues in these four countries are provided below.
38. **Botswana:** In their northern range elephant populations have expanded westwards from the Chobe area into former range areas in the Okavango Delta and along the Kavango River. Cross-border elephant movement occurs into Namibia, Zambia, Zimbabwe and Angola. A separate small population in the south of the country occurs in the Northern Tuli Block, with movement into south-eastern Zimbabwe and northern South Africa<sup>35</sup>.
39. **Namibia:** Namibia's elephant population occurs only in the north of the country, with most elephants found in the north-east in the areas bordering Botswana and Angola, particularly in Zambezi Region, and in Khaudom/ Kavango. A separate population has been protected inside Etosha National Park, which is adjacent to the population of "desert elephants" in Kunene in the north-west. Community conservancies have had land allocated, increasing potential elephant range in the north-east and to the north of Etosha NP<sup>36</sup>.
40. **South Africa:** Elephants are confined largely to fenced protected areas and private reserves in 2% of the country's total land area. An increasing, though still small, proportion of the South African elephant population is found in private reserves. Those reserves bordering Kruger National Park have populations with ranges that are contiguous with the National Park, but the others, which are isolated and scattered around the country, are too small to sustain viable populations. The on-going creation of trans-frontier parks and conservation areas with Mozambique and Zimbabwe could lead to the expansion of elephant ranges in all three countries, but efforts are partly being frustrated by the deteriorating situation in Mozambique and in Zimbabwe (see below).
41. **Zimbabwe:** Human encroachment was reported in Gonarezhou National Park in the AED 2002. There remains uncertainty over the unfolding of this process in areas both within and outside protected areas around the country. Emerging trans-frontier parks and conservation areas have the potential to increase the range available to elephants, with linkage to populations in Botswana and Zambia in the northwest and with South Africa and Mozambique in the south.

## 5. Threats

42. Over the whole continent, the long-term threat to elephants is the loss or conversion of habitat through human expansion into elephant range, associated human-elephant conflict and the impacts of climate change. In Central African forests, the impacts of forestry activities including both deforestation (habitat

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<sup>33</sup> Breuer, T., Maisels, F. & Fishlock, F. (2016) *The consequences of poaching and anthropogenic change for forest elephants*. *Conservation Biology*, Accepted article. DOI: 10.1111/cobi.12679

<sup>34</sup> [http://www.elephantdatabase.org/preview\\_report/2013\\_africa\\_final/Loxodonta\\_africana/2013/Africa/Southern\\_Africa](http://www.elephantdatabase.org/preview_report/2013_africa_final/Loxodonta_africana/2013/Africa/Southern_Africa)

<sup>35</sup> Blanc, J.J., Barnes, R.F.W., Craig, G.C., Dublin, H.T., Thouless, C.R., Douglas-Hamilton, I. & Hart, J.A. (2007) *African Elephant Status Report 2007: an update from the African Elephant Database*. Occasional Paper Series of the IUCN Species Survival Commission, No. 33, LUCN/SSC African Elephant Specialist Group, IUCN, Gland, Switzerland, vi + 276pp.

<sup>36</sup> *Ibid.*

loss) and the building of roads (increasing human access) pose serious long-term and ongoing threats<sup>37</sup>. However, the immediate, more critical short-term threat is high levels of killing driven by the ivory trade<sup>38</sup>.

43. Data from the MIKE (Monitoring Illegal Killing of Elephants) programme – the primary source of data on levels of elephant poaching in Africa – indicated that by 2011, poaching reached the highest levels since the programme began in 2002<sup>39</sup>, with a slight decline and levelling off since then. It is estimated that in 2011 alone, illegal hunters claimed 40,000 elephants, and in just 3 years, between 2010 and 2012, 100,000 elephants were killed in Africa for their ivory<sup>40</sup>.
44. All African elephant populations are now at risk. The MIKE analysis to the end of 2015, reported by the CITES Secretariat on 3 March 2016<sup>41</sup> showed that poaching levels increased significantly from 2006 to a peak in 2011 in ALL FOUR African sub-regions. While Central Africa had the highest levels of elephant poaching, PIKE (Proportion of Illegally Killed Elephants) levels were above 0.5 in all sub-regions; a PIKE value of 0.5 or higher indicates that the elephant population is very likely to be in net decline.
45. The MIKE analysis further indicated that
  - from 2011, levels of illegal killing of elephants were "slightly declining and leveling off thereafter. The PIKE level in 2015 remained virtually unchanged compared to 2013 and 2014";
  - "estimated poaching rates overall remain higher than the normal growth rate of elephant populations. Therefore, the elephant population at MIKE sites overall is likely to have continued to decline in 2015." and
  - "Despite variation at the site level, poaching levels remained stable across African MIKE sites overall in 2015, albeit at unacceptably high levels, especially in Central and West Africa and specific sites in Eastern and Southern Africa".
46. Sites where a substantial decline in PIKE was recorded in 2015 were Tsavo (Kenya), with a 16% decrease, and Pendjari (Benin), where PIKE declined by 10%. A notable increase in PIKE was recorded in Kruger (South Africa), which went from 0.17 in 2014 to 0.41 in 2015 (a 23% increase); while this PIKE level was still below the sustainability threshold of 0.5 in 2015, it is a cause for serious concern. PIKE also increased in Ruaha-Rungwa, Tanzania, by 16% and in Chewore, Zimbabwe, by 12%. At the regional level, PIKE levels remained below 0.5 in Eastern and Southern Africa, while they continued to sit above that level in Central and West Africa.
47. The MIKE programme is thought to provide conservative estimates of poaching rates<sup>42</sup>. The MIKE sites with the best quality data are also likely to be more intensively managed and therefore protected from poachers, and there is difficulty in designating poaching mortality in cases where it is impossible to determine the cause. While attempts have been made to select MIKE sites that are representative of national and regional trends, some concerns are held that the existing MIKE sites do not cover the whole of the elephant range. It was noted at the 65<sup>th</sup> CITES Standing Committee meeting<sup>43</sup> that "MIKE data...may have underestimated the true scale at which elephant populations are being decimated in parts of Africa." Examples of significant declines in Tanzania<sup>44</sup> (Selous Game Reserve) and five countries in Central Africa<sup>45</sup> were not detected by the MIKE sites in those regions. The significant decline in Sioma Ngwezi Park in Zambia is another example. The GEC found an 85 percent carcass ratio (the ratio of dead elephants to all elephants, alive and dead); according to the project's coordinator, "The Kwando area of

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<sup>37</sup> Maisels et al. (2013) *op. cit.*

<sup>38</sup> SC66 Doc 47.1. Annex 1.

<sup>39</sup> CoP16 Doc. 53.1 (2013) *Monitoring the Illegal Killing of Elephants*.

<sup>40</sup> Wittemyer, G., Northrup, J., Blanc, J., Douglas-Hamilton, I., Omondi, P., & Burnham, K. (2014), *Illegal killing for ivory drives global decline in African elephants*. PNAS, vol. 111 no. 36. Accessible at: <http://www.pnas.org/content/111/36/13117.abstract>

<sup>41</sup> [https://cites.org/eng/news/pr/african\\_elephants\\_still\\_in\\_decline\\_due\\_to\\_high\\_levels\\_of\\_poaching\\_03032016](https://cites.org/eng/news/pr/african_elephants_still_in_decline_due_to_high_levels_of_poaching_03032016)

<sup>42</sup> Wittemyer et al., *ibid.*

<sup>43</sup> SC65 Doc. 42.7. *Disposal of Ivory Stocks*.

<sup>44</sup> Jones, T. & Nowak, K. (2013) *Elephant declines vastly underestimated*. *National Geographic - A Voice for Elephants*, December 2013. Accessible at: <http://newswatch.nationalgeographic.com/2013/12/16/elephant-declines-a-view-from-the-field/>

<sup>45</sup> Maisels et al. (2013), *op. cit.*



southwestern Zambia is experiencing the worst poaching of any major savanna elephant population"<sup>46</sup>. The Park is part of the Kavango-Zambezi Transfrontier Conservation Area, better known as KAZA which extends into Angola, Botswana, Namibia and Zimbabwe as well as Zambia. The GEC coordinator warned that "because Sioma Ngwezi is close to Botswana's Okavango Delta region – the world's largest single remaining population – it's only a matter of time before poachers begin killing elephants there"<sup>47</sup>.

48. The poaching threats facing elephant populations in Central and Eastern Africa have been less of a concern in Southern Africa until recently. However, this region has experienced an increase in poaching pressure as well in most recent year. This increase was noted in 2011, with levels of illegally killed elephants exceeding replacement rates. There has been a small improvement since then, but poaching rates remain high on a regional scale. Mozambique, in particular, has seen intense elephant poaching in recent years, but all four Appendix II countries are now experiencing increased killing of elephants.
49. Zimbabwe is facing a significant threat to its elephants<sup>48</sup> from ivory poachers. The 2014 programme of aerial surveys showed that in key northern populations of the Mid-Zambezi Valley and Sebungwe, there have been steep declines of 40-75% respectively from 2001 to 2014, only partially offset by a steady increase in protected areas in the south-east adjacent to the border with South Africa. There have been outbreaks of elephant killing by cyanide poisoning in the north-western area of Hwange National Park; more than 300 were reported killed in 2014<sup>49</sup>, and at the end of October 2015, it was reported that 62 had been poisoned with cyanide in Hwange and Kariba over the previous month<sup>50</sup>.
50. The incidence of poaching appears to be increasing in formerly "safe" Botswana, Namibia and South Africa. Press releases in 2015 and 2016 indicate a small, but significant increase in elephant and rhino poaching in three parks that have been considered up to now as strongholds for those species:

1. Botswana's Chobe National Park

"Wildlife officials in Maun and Gaborone said that ivory poaching, previously kept at minimal levels by BDF operations and the absence of corruption in the wildlife department and law enforcement system, was now increasing and over three to four years had climbed to average 30-50 elephants a year in the Chobe-Linyanti region."<sup>51</sup>

2. Namibia's Etosha National Park

"Poachers killed 12 rhinos in Namibia's Etosha National Park and in north-western Kunene region so far this year, authorities said.... Poachers also slaughtered 11 elephants this year in north-eastern Zambezi and Kavango east regions... Poachers killed 23 rhinos and 76 elephants last year in Namibia, Romeo Muyunda, ministry spokesman said."<sup>52</sup>

3. South Africa's Kruger National Park

"Poachers have killed 19 elephants so far in 2015 in South Africa's biggest national park, whose elephant population had largely been spared attacks by poaching syndicates until this year, South African officials said Thursday.... Officials had feared that the widespread slaughter of elephants elsewhere in Africa could eventually threaten Kruger park, which has been vulnerable to poachers who enter through the border with neighboring Mozambique."<sup>53</sup> "South African authorities ...launched an investigation into wildlife poisoning believed to be committed by poachers. This came after ranchers discovered an elephant carcass... in the Kruger National Park... Last year the KNP

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<sup>46</sup> Cruise, A. (2016) *Elephants Wiped Out on Alarming Scale in Southern Africa*. National Geographic, 6 April 2016. Accessible at: <http://news.nationalgeographic.com/2016/04/160406-elephants-wiped-out-alarming-scale-Southern-Africa/>

<sup>47</sup> *Ibid.*

<sup>48</sup> <http://www.bloomberg.com/news/articles/2015-02-18/zimbabwe-elephant-population-dwindles-amid-threat-from-poachers>

<sup>49</sup> <http://www.ibtimes.com/poachers-allegedly-poison-22-elephants-death-zimbabwe-authorities-recover-tusks-2157935>

<sup>50</sup> <http://www.theguardian.com/world/2015/oct/26/22-more-elephants-poisoned-cyanide-zimbabwe-reserve>

<sup>51</sup> <http://africanarguments.org/2015/07/23/no-longer-at-ease-clouds-on-the-horizon-for-botswanas-conservation-success-story-by-keith-somerville/>

<sup>52</sup> <http://www.bloomberg.com/news/articles/2015-04-12/poachers-kill-12-rhinos-so-far-this-year-in-namibia>

<sup>53</sup> <http://www.usnews.com/news/world/articles/2015/10/22/south-africas-kruger-park-says-19-elephants-poached-in-2015>

experienced a similar incident... Although poisoning has occurred at a low level in South Africa in recent history, it is a real problem in neighbouring countries such as Mozambique and Zimbabwe."<sup>54</sup>.

51. The most recent MIKE report to the 66<sup>th</sup> CITES Standing Committee meeting (SC66)<sup>55</sup> also noted that "worrying reports of escalated poaching levels are emerging from a number of MIKE sites, including... Kruger National Park (South Africa)."
52. The fact that poachers are now targeting these areas is indicative of the level of pressure exerted by criminal syndicates, who are also attacking rhino populations, and the vulnerability of the elephant populations.

## 6. Utilization and trade

### 6.1 National utilization

53. Elephants are utilized in a variety of ways in Africa: ivory, skin and hair are made into a variety of products; elephant meat is consumed in parts of West, Central and Southern Africa; elephants are hunted for sport; and live elephants are caught for entertainment purposes.
54. While Botswana has no legal domestic ivory market (except for allowing one-off transfers of ownership), legislation in Namibia, South Africa and Zimbabwe allows domestic sales of ivory subject to permit (although it is unclear if a moratorium is still in effect in Namibia – see section 6.5 below). However, effective tracking of retail ivory markets was reported to be only "Partial" in all three countries in 2004<sup>56</sup>, and as noted in Section 6.4 below, there were still discrepancies in 2013 in the national-level registration and tracking of tusks exported as hunting trophies. It is therefore not clear whether the domestic ivory markets in the three countries are effectively monitored today. If these domestic markets are not effectively monitored and controlled, the linkages between legal trade and illegal trafficking will become stronger.
55. All four countries have legalized sport hunting of elephants – see section 7.1 National legislation. However, Botswana currently has a ban on all sport hunting, including that of elephants.
56. Products made from elephant hair were sold in Namibia, seemingly as a bi-product of trophy hunting and according to CITES implementing legislation, parts from elephants may still be sold subject to permit - see section 7.1 National legislation. Zimbabwe's proposal to CoP12 (proposal Prop. 12.10) reported that hide is recovered from animals mainly shot for problem animal control (PAC) as well as on legal hunting operations, or killed for other management reasons such as "mercy killing or killing in self-defence". In South Africa, the hides from hunted PAC elephants can be sold. In 2002, it was reported that "Botswana presently does not recover elephant hide from elephant killed in protection of property due to lack of storage"; it was reported in 2006 there was a small legal trade in hides, mainly to Zimbabwe<sup>57</sup>.

### 6.2 Legal trade

57. The split-listing of African elephants means that commercial trade in specimens from elephant populations in Appendix I is not permitted, while exemptions allow ivory and other specimens from the populations of the four Appendix II countries to be traded. This means that CITES policy on elephants is being pulled in different directions. This intrinsic tension of split-listing feeds expectations that ivory trade could be legalized in the not too distant future. These expectations have an important influence on investment decisions since capital-widening investments are made to meet future market expansion. This leads to a consolidation of existing market institutions in the legal markets and also reinforces linkages between legal and illegal trade.

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<sup>54</sup> <http://allafrica.com/stories/201603030579.html>

<sup>55</sup> SC66 Doc 47.1. Annex 1.

<sup>56</sup> TRAFFIC (2004) *Domestic ivory markets: Where they are and how they work. Briefing Document for CoP13*. TRAFFIC International, Cambridge.

<sup>57</sup> Anon (2006) *Elephant Conservation and Management and the Ivory Trade in Botswana and South Africa*. Unpublished report. November 2006.

58. Under the Appendix II status of these elephant populations, two “one-off” sales of registered raw ivory from government-owned stocks (excluding seized ivory and ivory of unknown origin) were authorized – the first to Japan in 1999 and the second to Japan and China in 2008. From CoP14 until 9 years after the 2008 sale (i.e. 2017), it was decided “no further proposals to allow trade in elephant ivory from populations already in Appendix II shall be submitted to the Conference of the Parties”<sup>58</sup>. However, Namibia and Zimbabwe were allowed to maintain exemptions for continuous sales of ivory as jewellery or “ekipas” (Namibia) – but see Section 6.5 below – and carvings (Zimbabwe) for “non-commercial purposes”.
59. A report by UNEP-WCMC on legal trade in elephant parts and derivatives for the period 2012-13 was provided to the SC66 meeting<sup>59</sup>. Reported legal trade in *L. africana* directly from African range States came principally from hunting trophies (including tusks). Records show the direct export of 19,838 kg and 2,307 tusks by number, while countries of import recorded the import of 1,414 tusks and 956 kg of tusks, a notable discrepancy. This reveals there is very little or no effective monitoring of this legal trade.
60. Trade in tusks was primarily from Zimbabwe, with a small amount also exported by Mozambique in 2013 (reported by countries of import only); exports from both of these countries were primarily hunting trophies. There was a large discrepancy in trade recorded by weight from Zimbabwe, which can be partially explained by Zimbabwe reporting exports primarily by weight, whereas countries of import largely reported trade in number of tusks. Exports of tusks for trophies were apparently within quotas for Namibia and South Africa, although there was inconsistent reporting of parts from the same animal, either as separate trophies or combined into one trophy. This lack of coherence confirms that domestic markets are poorly regulated and offer broad opportunities for laundering.
61. A separate analysis of data extracted from the CITES Trade Database<sup>60</sup> (maintained by UNEP-WCMC) for all the registered trade from 1997-2014 is provided in tables in Annex 1. The key point to note is the very clear discrepancies between reported values for all categories of ivory in legal trade, including tusks, hunting trophies and ivory carvings/ pieces by exporting and importing countries, a problem that has also been noted in UNEP-WCMC’s report to SC66.
62. The tension introduced by the split-listing of African elephants, the apparent lack of effective control of existing legal markets and the expectation that legal trade may be introduced is a powerful combination of forces that seriously influences the global ivory market.
- 6.3 Parts and derivatives in trade
63. Ivory (raw tusks and worked), skin, leather, hair, meat and live specimens are all traded. The international trade ban is marked by many loopholes and ample room for evading its controls.
- 6.4 Illegal trade
64. Data on the illicit ivory trade reinforces and extends the reports of poaching from MIKE field sites. Seizure data from the CITES Elephant Trade Information System (ETIS) compiled by TRAFFIC and published in December 2013<sup>61</sup> showed that illegal trade in ivory was at its highest levels in 2011-12 since ETIS records began in 1989. A 2014 report<sup>62</sup> by TRAFFIC echoed these findings and highlighted the trade routes that had been focussed on West and Central Africa but have shifted to East Africa, particularly Tanzania and Kenya, as the primary exit points for illicit ivory leaving the African continent. Most ivory is destined for China, although Thailand is also a destination, and transit points have been identified in the Middle East (United Arab Emirates), Europe (Turkey, Spain), Southern Asia (Sri Lanka) and Asia/ Southeast Asia (Hong Kong, Indonesia, Malaysia, Viet Nam).

<sup>58</sup> Annotation 6 to the Appendix II listing of populations of *Loxodonta africana* in Botswana, Namibia, South and Zimbabwe. Appendices I, II and III, valid from 5 February 2015.

<sup>59</sup> SC66 Doc 47.1. Annex 1.

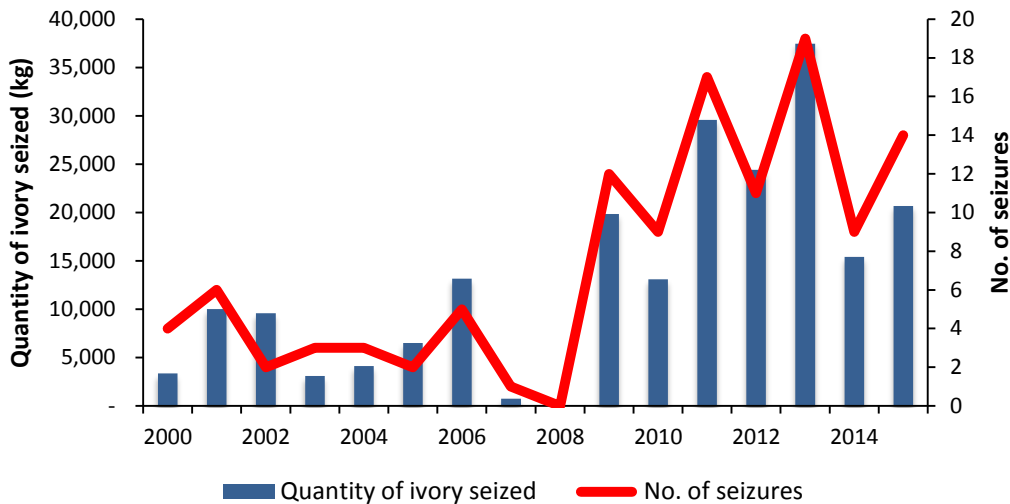
<sup>60</sup> <http://trade.cites.org/>

<sup>61</sup> CITES (2013) Status of African elephant populations and levels of illegal killing and the illegal trade in ivory: A report to the African Elephant Summit. December 2013. Prepared by CITES, IUCN/SSC African Elephant Specialist Group, and TRAFFIC International. Accessible at: [http://cmsdata.iucn.org/downloads/african\\_elephant\\_summit\\_background\\_document\\_2013\\_en.pdf](http://cmsdata.iucn.org/downloads/african_elephant_summit_background_document_2013_en.pdf)

<sup>62</sup> Milliken, T. (2014) *Illegal Trade in Ivory and Rhino Horn: an Assessment Report to Improve Law Enforcement Under the Wildlife TRAPS Project*. USAID and TRAFFIC. TRAFFIC International, Cambridge, UK.

High levels of illegal trade and seizures have continued the trend of increase to 2013, the most recent year for which reasonably complete records are available, and TRAFFIC informed the CITES Standing Committee (SC) in January 2016 that “The estimated mean of illegal ivory trade activity in 2012 shows an increase over 2011 and increases further in 2013”<sup>63</sup>.

65. A collation of information from publicly reported sources by the Environmental Investigation Agency<sup>64</sup> on large ivory seizures over the period 2000-2015 shows a similar pattern of increase from the early 2000s, to a peak in 2013; this pattern can be seen in the summary table below. There was a slight drop in 2014 but an increase in 2015, supporting the conclusion that the illegal ivory market remains very active. It is important to note that although enforcement may be improving (and this may partially explain why the number of seizures increased after 2008), the amount of ivory seized is only a part of the total flow of ivory.



Estimated weight of ivory and number of seizure cases by year, 2000-2015 (EIA 2016)

66. The report by TRAFFIC to SC65 in 2014 showed a clear increase in the number of seizures made before the ivory left the African continent<sup>65</sup>. For the first time, the number of large-scale seizures made in Africa exceeded those made in Asia. Just three African countries — Kenya, Tanzania and Uganda — accounted for 80% of those seizures. Large-scale ivory seizures were indicative that transnational organized crime is involved in the illicit ivory trade. The TRAFFIC report to SC66 notes that, while MIKE data appear to show a levelling off, or slight decline, in the illegal killing of elephants at sites across the continent, the illegal movement of trade in ivory has continued at record levels. Reasons for this difference may be due to time lags between poaching and the release into trade (and thus, seizures), and possible “leakage” from government stockpiles. There is also an apparent shift in the transport of ivory from large consignments in shipping containers to medium-sized quantities that may be moved by couriers and air travel, possible evidence of adaptation by criminal networks to increased vigilance by African port authorities. This flexibility may originate in the fact that these criminal networks operate as “multi-product firms” that are more versatile in reducing costs through scope economies (*i.e.* bundling of several products reduces the cost of producing them separately). The capacity of crime syndicates to circumvent controls is buttressed by their ability to move in several markets at the same time. This also allows them to maintain their profitability through all the phases of the business cycle.
67. The complex, specialized, and transnational nature of African supply chains is well documented<sup>66</sup>. Several reports during 2014-2015 focused on specific areas where major illegal trade is taking place. Hong Kong SAR is probably the largest centre for ivory trade and manufacture in the world, and a

<sup>63</sup> SC66 Doc 47.1. Annex 1.

<sup>64</sup> EIA (2016) Large scale ivory seizures based on public sources: 2000-2015. January 28, 2016, Environmental Investigation Agency, UK. Accessible at: [https://eia-international.org/wp-content/uploads/EIA\\_Large-scale-ivory-seizures-2000-2015.pdf](https://eia-international.org/wp-content/uploads/EIA_Large-scale-ivory-seizures-2000-2015.pdf)

<sup>65</sup> SC65 Doc. 42.1 (2014) Elephant Conservation, Illegal Killing and Ivory Trade.

<sup>66</sup> Milliken (2014), *op.cit.*; Vire, V. & Ewing, T. (2013) *Ivory's Curse. Born Free US and C4ADS.*

WWF study published in September 2015<sup>67</sup>, revealed evidence of widespread illegality. Legally held ivory is being used by traders to launder poached ivory, much of which is re-exported. The announcement on 13 January 2016 by Hong Kong SAR's Chief Executive that they "will take steps to ban totally the sale of ivory in Hong Kong" is therefore a welcome development<sup>68</sup>. In Tanzania, a report in November 2014 suggested that organised, international criminal networks are responsible for the killing of elephants and the transportation of very large quantities of ivory to supply Asian markets<sup>69</sup>.

68. Considerable efforts have been underway for some years to reduce the demand for ivory in China, with a statement by the Chinese President signalling intention to close domestic markets (see section 6.5 below); an encouraging sign that these efforts may be having some effect was signalled by a recent study of ivory prices<sup>70</sup>. There exists anecdotal evidence of an apparent drop in the price of wholesale ivory in China from a high of US\$ 2,100 per kg in 2014 to some US\$ 1,100 per kg in late 2015. The association of the drop in price with the Chinese President's statement has been questioned, along with the suggestion that demand is falling across the board; there still appears to be a large illegal market in small ivory pieces<sup>71</sup>. Others have also been cautious in interpreting the changes by markets within China<sup>72</sup>, noting that the ivory trading companies and networks are sophisticated and devious, able to exploit loopholes (such as pre-Convention ivory) and opportunities to amass secret stockpiles and launder illegal ivory through legal outlets in places like Hong Kong SAR. For example, Vigne & Martin (2015) found that the number of outlets selling ivory in Beijing and Shanghai increased by more than 100% between 2002 and 2014<sup>73</sup>. Some companies may be exploring options to get out of the trade, but others seem determined to persist, with ivory outlets shifting from retail stores directly to the consumer.
69. Given this complexity and the continuing threats posed by the ivory trading establishment, this proposal would restore all African elephants to Appendix I. We believe this would send a clear signal to the world that trade in ivory is unacceptable. Such an unambiguous message and clear regulatory measure would assist agencies with combating the illegal trade in ivory.

#### 6.5 Actual or potential trade impacts

70. Although the sales of ivory were promoted as a source of revenue that would be used for elephant conservation, and as a means to satisfy – and thus reduce – demand for ivory, it appears that the opposite occurred. Poaching has increased, and most dramatically following the second one-off sale. Such sales give the false impression to consumers that ivory trade has been, or will be legalized. Maintaining exemptions for jewellery and carved ivory has a similar effect. These exemptions are another loophole through which illegal ivory may find its way to the final consumer. A key example has been the trade in ekipas in Namibia: it was reported in 2007<sup>74</sup> that the strict registration and certification system promised by Namibia at CoP13 to control trade in ekipas had not been implemented. To their credit, the Namibian government imposed a moratorium on ekipa trade in September 2008<sup>75</sup> as part of a moratorium on trade in worked ivory pending enactment of the Controlled Wildlife Products Bill in December 2008 (see section 7.1 below)<sup>76</sup>. It is unclear if the moratorium is still in effect.

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<sup>67</sup> WWF (2015) *The Hard Truth*. WWF-Hong Kong, September 2015

<sup>68</sup> <http://www.info.gov.hk/gia/general/201601/13/P201601130793.htm>

<sup>69</sup> EIA (2014) *Vanishing Point. Criminality, Corruption and the Devastation of Tanzania's Elephants*, Environmental Investigation Agency, November 2014

<sup>70</sup> <http://savetheelephants.org/about-ste/press-media/?detail=sharp-fall-in-the-prices-of-ivory-tusks-in-china>

<sup>71</sup> <http://voices.nationalgeographic.com/2016/01/26/link-between-ivory-price-drop-and-chinas-trade-ban-questioned/>

<sup>72</sup> Crosta, A., Sutherland, K. & Beckner, M. (2015) *Blending Ivory. China's Old Loopholes, New Hopes*. Elephant Action League (EAL), Los Angeles.

<sup>73</sup> Vigne, L. & Martin, E.B. (2015) *China Faces a Conservation Challenge. The expanding elephant and mammoth ivory trade in Beijing and Shanghai*. Published by Save the Elephants and the Aspinall Foundation.

<sup>74</sup> Reeve, R., Pope, S. & Stewart, D. (2007) *Ivory, Ekipa and Etosha. The Hidden Cost to Elephants and Rhinos of Namibia's Wildlife Policy*. David Shepherd Foundation, May 2007.

<sup>75</sup> <http://allafrica.com/stories/200808210652.html>

<sup>76</sup> <http://mg.co.za/article/2008-08-20-namibia-bans-ivory-trade>

71. At the same time, the growing strength of Asian economies, coupled with cultural values and state agencies' promotion of domestic markets<sup>77</sup>, has allowed this consumer demand to grow steadily, independently of ivory supply; the treatment of ivory markets as simple supply-demand systems is a risky simplification. The MIKE programme found that demand for legally traded mammoth ivory, taken as an indicator of demand for illegally traded ivory, was a strong predictor of the levels of illegal killing of elephants at study sites<sup>78</sup>. With increasing demand, prices soared, creating even greater incentives for poachers. Even if prices are reduced through a legal market, this may lead to increased demand that will end up pushing prices upwards again. These effects are characteristic of all short-term business cycles present in most markets. Multi-product firms (or criminal syndicates) can endure these cycles without too much difficulty, but the elephant populations may not be able to do so. Although there may be some anecdotal evidence of a drop in price of legal ivory, this reduction will not necessarily affect the level of operations of the illegal trade and thus poaching will continue.
72. It has proven difficult to establish clear links between specific events, such as stockpile sales or moratorium decisions and changes in the levels of illegal killing<sup>79</sup>. The specific effects of such discussions on indices of consumer demand have not been studied, and it may be impossible to determine exact linkages. However, it does appear undeniable that the total ban on ivory sales in 1989 had the effect of rapidly and dramatically reducing the killing of elephants. In contrast, given its temporary nature, the 'moratorium' on trade in ivory from Appendix II elephant populations for nine years from 2008 may have served as a signal to consumers that sales could be allowed after it ends in 2017. More importantly, it was also a signal to traders and processors to maintain their levels of operation and even to engage in new investments. These market participants have an economic interest in acting to develop the market, not simply respond to it. As with any business enterprise, these traders are potent drivers of the market's expansion. Business history shows that markets are proactively promoted and developed by firms and government agencies<sup>80</sup>.
73. China and the US have recently agreed at Presidential level to "enact nearly complete bans on the import and export of ivory" and to take "timely and significant steps to halt the domestic commercial trade in ivory"<sup>81</sup>. Earlier in the year, the Chinese Government announced that it would be phasing out its domestic ivory markets<sup>82</sup>. No firm timetable has been announced although senior US officials were quoted in late October 2015 as hoping that a ban would be in place within a year, perhaps with some tightly defined exemptions<sup>83</sup>. As noted above, Hong Kong SAR's Chief Executive has announced that a total ban on the sale of ivory in Hong Kong will be implemented as soon as possible<sup>84</sup> while, the EU has developed an Action Plan against Wildlife Trafficking, which aims, *inter alia*, to largely close the EU domestic market for ivory (except for antiques) and prohibit export of raw pre-convention ivory<sup>85</sup>.
74. In contrast, the approach taken by Japan to its domestic ivory market is woefully inadequate. A report<sup>86</sup> in 2015 noted that: "Though frequently highlighted as a model of domestic ivory control, Japan's system is plagued by loopholes and undercut by weak legislation to such an extent that no meaningful control exists at even the most basic level. The volume of ivory being traded is on the rise, illegal activity is rampant, and abuse of the system is pervasive." This apparent culture of tolerating evasions both amongst traders and some government officials has weakened enforcement of internal controls in the country that received ivory from both the CITES-approved auctions from Appendix II countries in 1999 and 2008.

<sup>77</sup> <http://voices.nationalgeographic.com/2014/10/22/legalizing-ivory-trade-taking-to-new-heights-a-dangerous-policy-proposal/>

<sup>78</sup> SC65 Doc 42.1

<sup>79</sup> CoP16 Doc. 53.1, pp.6-7

<sup>80</sup> The studies by Alfred Chandler and the Business History Group at Harvard University corroborates this point. See Chandler, A. (1990) *Scale and Scope. The Dynamics of Industrial Capitalism*. Harvard University Press.

<sup>81</sup> <https://www.whitehouse.gov/the-press-office/2015/09/25/fact-sheet-president-xi-jinpings-state-visit-united-states>

<sup>82</sup> <http://www.theguardian.com/environment/2015/may/29/china-agrees-to-phase-out-its-ivory-industry-to-combat-elephant-poaching>. The statement said that China "will strictly control ivory processing and trade until the commercial processing and sale of ivory and its products are eventually halted."

<sup>83</sup> [https://www.washingtonpost.com/world/china-to-ban-ivory-trade-within-a-year-or-so-as-pressure-mounts-on-hong-kong/2015/10/21/4c96c5e4-7683-11e5-a5e2-40d6b2ad18dd\\_story.html](https://www.washingtonpost.com/world/china-to-ban-ivory-trade-within-a-year-or-so-as-pressure-mounts-on-hong-kong/2015/10/21/4c96c5e4-7683-11e5-a5e2-40d6b2ad18dd_story.html)

<sup>84</sup> <http://www.info.gov.hk/gia/general/201601/13/P201601130793.htm>

<sup>85</sup> See *Communication on the EU Action Plan against Wildlife Trafficking*, adopted on 26 February 2016 and accessible at: [http://ec.europa.eu/environment/cites/trafficking\\_en.htm](http://ec.europa.eu/environment/cites/trafficking_en.htm)

<sup>86</sup> EIA (2015) *Japan's Illegal Ivory Trade and Fraudulent Registration of Ivory Tusks*. Environmental Investigation Agency, December 2015.

75. The signal sent by restoring all African elephant populations to Appendix I would underpin the actions by China, the EU, Hong Kong SAR and the US, and is expected to have a strong dampening effect on demand and a significant effect on the expectations of traders and processors who are key drivers of the market for ivory. This will bring about the desired objective of reducing illegal killing of elephants.

## 7. Legal instruments

### 7.1 National<sup>87</sup>

76. **Botswana:** CITES entered into force in their legislation on 12 February 1978. The most relevant domestic legislation is the Wildlife Conservation and National Parks (Hunting and Licensing) Regulations (Section 92) 10th August 2001, and in particular Reg. 34/39/40/41, and the Wildlife Conservation and National Parks Act 1992 which implemented CITES. This has been assessed as Category 2 under CITES, not meeting all requirements for CITES compliance<sup>88</sup> although some amendments have been submitted for consideration. Penalties for offences include fines of \$300-\$6,000+ and imprisonment of up to 15 years. The penalties may, in addition, incur forfeiture of proceeds of crime. Under the legislation, hunting is permitted by license, with restrictions on where hunting may take place, which animals may be hunted, the type of weapon, and others, although there are exemptions and loopholes. There are restrictions on import/export/re-export of trophies. There have been moratoria and/or bans on hunting over recent decades: elephant hunting was stopped in 1983 due to concerns that tusk weights were declining and populations were retreating inside protected areas, and reinstated in 1996 with prescribed quotas; lion hunting was stopped during 2001-04 and again from 2008 to present; and hunting of all wildlife was banned in January 2014 because of perceived population declines and corruption in the distribution of revenues.
77. **Namibia:** CITES entered into force on 18 March 1991. Their principal domestic legislation (Category 1, 'believed generally to meet the requirements for implementation of CITES') was the Nature Conservation Ordinance (4 of 1974), which established controls on the hunting of wildlife, including elephants as "Specially Protected Game", on both state-owned and private land. The Nature Conservation Amendment Act, No. 5 of 1996, gave community conservancies the same rights as freehold landowners over the conservation and management, including hunting, of wildlife. In Dec 2008 Namibia enacted the Controlled Wildlife Products and Trade Act, followed in 2011 by Regulations, that together update the penalties for offences which would contravene CITES and specify the requirement for permits for possession of domestic or international sale of ivory. The Namibian Government is currently drafting a Parks and Wildlife Management Bill for proposed consolidation and reform of the existing legislation. This Bill is still in preparation and it is thought unlikely that it will become law before 2016. Forfeiture legislation applies.
78. **South Africa:** CITES entered into force on 13 October 1975. Legislative jurisdiction is split between national and provincial governments. South Africa's national legislation is classed as Category 1 by CITES. The most relevant legislation is the National Environmental Management: Biodiversity Act, 10 of 2004 (as amended), which put in place protection for threatened wildlife. It is supplemented by the Threatened or Protected Species Regulations 2007 and the National Norms and Standards for the Management of Elephants in South Africa (GN 251 (29/2/2008)). The CITES Regulations (R.173 in GG3302 2010, amended in 2014), began formal implementation only in 2010, establishing management and scientific duties related to environmental affairs, conditions for international trade, registration requirements for individuals trading specimens internationally, and creating offences and penalties. Penalties are doubled for second and subsequent offences and there is provision for imposing financial penalty equating to three times the value of the animal if protected. Forfeiture legislation applies.
79. **Zimbabwe:** CITES entered into force in Zimbabwe on 17 August 1981. Its principal legislation (Category 1) is to be found in the Parks and Wildlife Act 1975, amended 22/2001. Zimbabwe's obligations under CITES in relation to the export and import of ivory were established through the Parks and Wildlife (Import and Export) (Wildlife) Regulations SI 76/1998, which link to Section 129 of the Act. Section 128 of the Act specifies substantial penalties relating to the illegal trading in ivory. It

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<sup>87</sup> For legislation in Namibia, South Africa and Zimbabwe, see DLA Piper (2015) *Empty threat 2015: Does the law combat illegal wildlife trade? A review of legislative and judicial approaches in fifteen jurisdictions, in partnership with the Royal Foundation*, available at [https://www.dlapiper.com/~/\\_media/Files/News/2015/05/IllegalWildlifeTradeReport2015.pdf](https://www.dlapiper.com/~/_media/Files/News/2015/05/IllegalWildlifeTradeReport2015.pdf)

<sup>88</sup> <https://cites.org/eng/legislation>

also specifically prohibits the killing or hunting of Specially Protected Animals. Elephants are not designated as Specially Protected Animals; thus mandatory custodial penalties under Section 128 only apply to illegal trade in ivory, not to offences involving illegal killing or hunting of elephants. The Act incorporates specific forfeiture provisions. In addition, the Environmental Management Act 13/2002 addresses environmental protection, which outlaws the cyanide poisoning responsible for recent poaching of elephants in Zimbabwe.

## 7.2 International

80. In 1989, a decision was taken at CoP8 to list African elephants in Appendix I of CITES as a result of the poaching crisis of the 1970s-80s. However, the species was subsequently split-listed when national populations from Botswana, Namibia and Zimbabwe were transferred to Appendix II in 1997, followed by South Africa in 2000.

## 8. Species management

### 8.1 Management measures

81. Management measures for elephants vary greatly throughout the continent. They range from creation of migration corridors and transfrontier parks and conservation areas (e.g. the Great Limpopo Transfrontier Park and the Limpopo-Shashe and Kavango-Zambezi Transfrontier Conservation Areas), translocation of animals, creation of artificial waterholes, fencing and deterring animals from crops with, for example chilli peppers or beehives, to shooting of problem animals. Culling has not been employed as a management tool since Zimbabwe halted the practice in 1988 and South Africa in 1995.

### 8.2 Population monitoring

82. The ability of range States to monitor elephant populations varies greatly. The MIKE programme monitors populations and illegal killing at specific sites in several range States but is not intended to provide information on trends in total national or continental populations. The African Elephant Database stores data from elephant population surveys beginning in 1976. The most recent update of the database is the online 2013 African Elephant Database. The authors point out, however, that data quality varies considerably, depending, *inter alia*, on the methods used or the age of the data.

### 8.3 Control measures

83. The ability of range States to manage elephant populations, to regulate legal take, and to prevent poaching, varies greatly. A number of steps have been taken in recognition of the urgency for action to stem wildlife crime, involving not only elephants but also a wider range of species.
84. The report to SC66<sup>89</sup> describes a number of areas where efforts have been made to improve cooperation on the control of wildlife crime. At CoP16, Decision 16.78, paragraph a) called for the Secretariat to convene a CITES Ivory Enforcement Task Force. To date, the Secretariat has not been able to raise the funds necessary to call together such a Task Force, but its objectives are considered to have been partially/ largely met through the development and implementation of National Ivory Action Plans (NIAPs) – see below – and targeted support from, and collaboration with partners from the International Consortium on Combating Wildlife Crime (ICWC).
85. A range of International organisations have become increasingly engaged in tackling wildlife crime. The United Nations Office on Drugs and Crime (UNODC), on behalf of ICWC, led the development of “*Guidelines for forensic methods and procedures of ivory sampling and analysis*”, which were finalized and released in November 2014<sup>90</sup> and were followed up with a global review of forensic laboratory capacity to inform a broader project of combatting wildlife crime that UNODC will implement. The Lusaka Agreement<sup>91</sup>, with seven Parties and three additional signatories, came into force in 1996; the Lusaka Agreement Task Force (LATF) was set up to implement its objectives in 1999. Its objectives are to support the member states and collaborating partners in reducing and

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<sup>89</sup> SC66. Doc 47.1

<sup>90</sup> [https://cites.org/eng/ICWC\\_guidelines](https://cites.org/eng/ICWC_guidelines)

<sup>91</sup> <http://lusakaagreement.org/>



ultimately eliminating wildlife crime through facilitating cooperation in law enforcement, investigations, information exchange, and capacity building.

86. Through funding from the Secretariat, the World Customs Organization (WCO) organized a workshop on "Controlled Deliveries of Illegally Traded Wildlife Products" in Bangkok in January 2015, with follow-up training involving deployment of customs officers from China to Kenya and South Africa. Further activities are to follow. INTERPOL is implementing Project WAYLAY in close cooperation with its ICCWC partners, focusing its first phase on elephant ivory and rhinoceros horn. It aims to establish an international network of experts, harmonize procedures and develop guidance. The United Nations General Assembly (UNGA) in July 2015 unanimously adopted a Resolution on 'Tackling Illicit Trafficking in Wildlife', which calls upon Member States, *inter alia*, to make illicit trafficking in protected species of wild fauna and flora involving organized criminal groups a serious crime.
87. Resolution Conf. 10.10 (Rev. CoP16) urged Parties to maintain an inventory of government-held stockpiles of ivory and, where possible, of significant privately held stockpiles of ivory within their territory. On 21 January 2015, the Secretariat issued Notification to the Parties No. 2015/005 to remind Parties of the above reporting obligation. While some Parties have not yet complied, a number of other countries have inventoried and destroyed their stockpiles. At SC65, the Committee encouraged all Parties in whose territory legal ivory markets exist or that export pre-convention raw elephant ivory for commercial purposes, to provide wholesale price data on such sales of raw ivory to the Secretariat, for integration into MIKE and ETIS analyses.
88. In addition to these international efforts, the implementation of targeted National Ivory Action Plans (NIAPs)<sup>92</sup> are intended to enhance the national implementation of CITES provisions. Eight Parties of "primary concern"<sup>93</sup>, eight Parties of "secondary concern"<sup>94</sup>, and three Parties of "importance to watch"<sup>95</sup> in both the poaching of elephants (source countries) and the illegal trade in ivory (transit and end consumer countries) have been directed by the Standing Committee to develop and implement NIAPs. These countries are required to report their progress in NIAP development and implementation to the Secretariat.
89. The African Elephant Action Plan (AEAP) was approved by African elephant range States in 2010 at CITES CoP15, and the African Elephant Fund was established to support the implementation of the AEAP<sup>96</sup>. International donors and range States are encouraged to back this initiative, through technical and financial support, and National Elephant Action Plans (NEAPs) are being developed as a result.
90. The Elephant Protection Initiative (EPI)<sup>97</sup> was launched in 2014 by Botswana, Chad, Ethiopia, Gabon and Tanzania, with the intention of bringing African Elephant range States, non-range States, intergovernmental organisations, NGOs, private sector and private citizens together to work in partnership to protect elephants and stop the illegal ivory trade; five additional range States have now joined. Activities include support for the development of NEAPs, as well as domestic legal frameworks and international actions limiting the ivory trade at both demand and supply ends of the chain, inventory and destruction of ivory stockpiles, education and fund-raising.

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<sup>92</sup> SC66 Doc. 29 (Rev.1). *National Ivory Action Plans Process*.

<sup>93</sup> China – including Hong Kong SAR, Kenya, Malaysia, the Philippines, Thailand, Uganda, the United Republic of Tanzania, Viet Nam.

<sup>94</sup> Cameroon, Congo, Democratic Republic of the Congo, Egypt, Ethiopia, Gabon, Mozambique, Nigeria.

<sup>95</sup> Angola, Cambodia, Lao People's Democratic Republic.

<sup>96</sup> CoP15 Inf. 68, *African Elephant Action Plan*.

<sup>97</sup> <http://www.elephantprotectioninitiative.org/about/>

91. Despite these many efforts, the rate of elephant killing has remained high. The relative failure of efforts to date may be attributed to the scale of the problem of combatting well-organised international networks. The coordination at different levels should be sustained and strengthened.

#### 8.4 Captive breeding and artificial propagation

92. Captive breeding presents no direct benefit to *in situ* conservation of African elephants<sup>98</sup> and is therefore not relevant to this proposal.

#### 8.5 Habitat conservation

93. African elephants occur in a number of protected areas, but these account for only 31% of their range; almost 70% of the species range is believed to lie outside protected areas<sup>99</sup>.

#### 8.6 Safeguards

94. These are not applicable since the proposal would result in the listing of all African elephants on Appendix I

### 9. Information on similar species

95. The Asian elephant (*Elephas maximus*) has been listed on CITES Appendix I since 1976. Poaching for ivory and illegal trade continue to pose a threat to its small and fragmented populations. As only male Asian elephants carry tusks and the sex ratio of many populations has been skewed through selective poaching in the past, increased demand for ivory will have a particularly devastating effect. Ivory from Asian elephants is also found in illegal trade, e.g. ivory from elephants in Myanmar has been reported on sale in Thailand and poaching for ivory continues to be a problem, for example in India.

96. The Asian elephant would also benefit from a comprehensive Appendix I listing for both species.

### 10. Consultations

97. Parts A, B, C.1 and C.2 of this proposal were sent by the CITES Management Authority for Kenya to the Management Authorities of Botswana, Namibia, South Africa and Zimbabwe on 15 April 2016 (vide a letter dated 12 April) to seek their comments. By the time of submission, responses had been received from South Africa, Zimbabwe and Namibia. While not in favour of the proposed transfer of its population to Appendix I, South Africa said they share with Kenya and other range States concerns about the illegal killing of elephants and illegal trade in ivory and associated impact on the status of the species as well as sustainable economic development and would be convening a Ministerial High level meeting just before the CoP meeting to develop an African Common Position for the CoP agreeing on a unified position. Zimbabwe said that they oppose the proposal as it threatens to remove its sovereignty in the manner that Zimbabwe manages her wildlife. Namibia stated that they were not convinced the transfer would prevent the illegal killing of the species and that populations in Appendix I were facing far greater levels of illegal killing than Appendix II populations. However, Namibia concurred that efforts must be put in initiatives at national levels to address illegal killing of the African elephant and illegal trade in their products if a positive impact to the conservation of African elephant as flagship species.

### 11. Additional remarks

98. It is highly questionable whether the ivory trade is an economically sustainable way to utilize elephants and whether revenues from the trade in ivory have made any contribution to elephant conservation. The high costs involved in policing the trade seem to exceed the potential benefits by far. These include monitoring costs for MIKE and ETIS, increased costs for anti-poaching and national law enforcement, technical missions to exporting and importing countries and so on. At the national level, the collective annual net revenue from ivory stockpile sales is reported to be small when compared to the costs involved, including for ivory storage, and compared to revenue from other sources.

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<sup>98</sup> [https://www.iucn.org/about/work/programmes/species/who\\_we\\_are/ssc\\_specialist\\_groups\\_and\\_red\\_list\\_authorities\\_directory/mammals/african\\_elephant/statements/captive\\_facilities/](https://www.iucn.org/about/work/programmes/species/who_we_are/ssc_specialist_groups_and_red_list_authorities_directory/mammals/african_elephant/statements/captive_facilities/)

<sup>99</sup> Blanc et al. (2007) African Elephant Status Report.

99. While there have been substantial improvements in control measures aimed at breaking the supply chain for illegal ivory, it remains more important than ever to reduce the demand at the consumer end. This is incompatible with a partial trade in ivory, or leaving the door open for its resumption at a future date. A unified approach, listing of all of Africa's elephants on Appendix I, sends a clear signal to consumers and criminal syndicates that international ivory trade is prohibited.<sup>100</sup>

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**Analysis of data on legal trade in elephant products during 1997-2014**  
(Source UNEP-WCMC)

**Table 1. Exports of Tusks**

Figures for 1997-2014, as reported by exporting and (in brackets) importing country  
1999 and 2008 one-off sales records excluded from calculation

Exporting country	Import Purpose				Total
	Hunting (no unit + kg)	Personal	Commercial trade	Blank/ others	
Botswana	4981 (2126 + 198 kg)	25 (47)	- (15)	- (19)	5006 (2207 + 198 kg)
Namibia	1063 (545)	25 (28 kg)	- (6)	- (4)	1088 (555 + 28 kg)
South Africa	2382 (593 + 90 kg)	518 (230)	13 (6)	2 (11)	2915 (840 + 90 kg)
Zimbabwe	2214 + 27044 kg (2725 + 2225 kg)	252 + 125 kg (421 + 137 kg)	2251 + 489 kg (35)	551 (37 + 157 kg)	5268 + 27658 kg (3218 + 2519 kg)

**Table 2. Exports of Trophies**

Figures for 1997-2014, as reported by exporting and (in brackets) importing country.

Exporting country	Import Purpose				Total
	Hunting (no unit + kg)	Personal	Commercial trade	Blank/ others	
Botswana	926 (2285)	4 (91)	- (7)	- (114)	930 (2497)
Namibia	570 + 45 kg (571)	15 (81)	- (1)	- (15)	585 + 45 kg (668)
South Africa	1016 (1603)	58 (115)	3 (6)	9 (43)	1086 (1767)
Zimbabwe	453 + 1 kg (4205 + 180 kg)	41 (366)	151 (185)	- (255)	645 + 1 kg (5011 + 180 kg)

**Table 3. Exports of Ivory carvings/pieces**

Figures for 1997-2014, as reported by exporting and (in brackets) importing country.

Exporting country	Import Purpose*					Total
	Hunting (no unit + kg)	Personal**	Scientific purposes	Commercial trade***	Blank/ others	
Botswana	78 (93)	- (35)	95 (154)	- (-)	- (-)	173 (282)
Namibia	- (9)	138 (127)	4 kg (-)	- (-)	- (-)	138 + 4 kg 136
South Africa	97 (3)	1813 (622)	132 (330 + 5 kg)	108 (28)	- (4)	2150 (987 + 5 kg)
Zimbabwe	49 + 25 kg (13 + 31 kg)	8162 + 10011 kg (839)	- (-)	2602 + 5 kg (363)	1119 + 31 kg (31)	11932 + 10072 kg (1246 + 31 kg)

\* Excluded purpose codes include Education (1 set from ZA), Legal (6 kg from ZA), Travelling exhibition (86 from ZW and ZA);

\*\*Excluded data include: as reported by exporting country - 62 sets from ZA, 64 sets from ZW, 16 pairs from ZW, 13 cm from ZW; as reported by importing country - 2 sets from ZA.

\*\*\*Excluded data include: as reported by exporting country - 8 sets from ZA, 5 sets from ZW, 12 pairs by ZW; as reported from importing country – 3 sets from ZA.

**Table 4. Exports of Live elephants**

Figures for 1997-2014, as reported by exporting and (in brackets) importing country

Exporting country	Import Purpose*					Total
	Breeding in captivity	Re-introduction or introduction into the wild	Travelling exhibition	Trade	Zoo	
Botswana	- (-)	30 (-)	- (-)	- (-)	- (-)	30 (-)
Namibia	- (6)	- (-)	- (13)	- (-)	27 (20)	27 (39)
South Africa	- (-)	167 (108)	16 (10)	13 (-)	27 (47)	223 (165)
Zimbabwe	- (-)	- (10)	- (5)	10 (7)	8 (20)	18 (42)

\*Negligible specimens for Education and Scientific purposes excluded.