PETITION TO THE SECRETARY OF THE INTERIOR TO LIST THE AFRICAN ELEPHANT (*Loxodonta africana*) AS ENDANGERED PURSUANT TO THE ENDANGERED SPECIES ACT

Photo credit: Vanessa Mignon

February 11, 2015

The International Fund for Animal Welfare,
Humane Society International,
The Humane Society of the United States, and
The Fund for Animals

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Honorable Sally Jewell
Secretary of the Interior
1849 C Street, N.W.
Washington. D.C. 20240

Mr. Dan Ashe, Director
U.S. Fish and Wildlife Service
1849 C Street, N.W.
Washington. D.C. 20240

PETITIONERS

Humane Society International
2100 L Street, NW
Washington, DC 20037

The Humane Society of the United States
2100 L Street, NW
Washington, DC 20037

International Fund for Animal Welfare
290 Summer Street
Yarmouth Port, MA 02675

The Fund for Animals
200 West 57th Street
New York, NY 10019

Date: February 11, 2015

NOTICE OF PETITION

Pursuant to Section 4(b) of the Endangered Species Act ("ESA"), 16 U.S.C. § 1533(b), Section 553(e) of the Administrative Procedure Act, 5 U.S.C. § 553(e), and 50 C.F.R. § 424.14(a), Petitioners, The International Fund for Animal Welfare, Humane Society International, The Humane Society of the United States, and The Fund for Animals hereby Petition the Secretary of the Interior and the U.S. Fish and Wildlife Service ("USFWS" or "the Service") to reclassify the African elephant (*Loxodonta africana*) from Threatened to Endangered. 16 U.S.C. § 1532(6) ("The term 'endangered species' means any species which is in danger of extinction throughout all or a significant portion of its range…").

This Petition presents substantial scientific and commercial information indicating that the African elephant is in danger of extinction throughout all or a significant portion of its range. *See* 50 C.F.R. § 424.14(b)(1) ("substantial information" is "that amount of information that would lead a reasonable person to believe that the measure proposed in the Petition may be

warranted"). Therefore, the Secretary of the Interior must make an initial finding "that the petitioned action *may be* warranted." 16 U.S.C. §1533(b)(3)(A)(emphasis added) (The Secretary must make this initial finding "[t]o the maximum extent practicable, within 90 days after receiving the Petition"); *HSUS v. Pritzker*, 2014 WL 6946022 (D.D.C. 2014) (holding that conclusive evidence is not required to make a positive 90-day finding). Petitioners are confident that a status review of the species, as required by 16 U.S.C. § 1533(b)(3)(B), will support a finding that reclassifying the African elephant as Endangered is in fact warranted.

The African elephant has suffered a major reduction in population size across its range primarily due to habitat loss, commercial overutilization, and severe poaching, and such decline continues unabated. The USFWS has a duty to protect the iconic African elephant by listing the species as Endangered under the federal Endangered Species Act, which would meaningfully contribute to African elephant conservation by strictly regulating the import, export, and interstate commerce in African elephant parts and products. *See* 16 U.S.C. § 1531(b),(c) (providing that federal agencies "shall utilize their authorities in furtherance of" the conservation purpose of the ESA). In order to promote African elephant conservation, as mandated by the ESA, the Service must (via an Endangered listing) require that trade in African elephant parts only occurs if it would in fact enhance the propagation or survival of the species or is for scientific purposes that benefit the species. Therefore, Petitioners strongly urge the Service to grant this Petition and conduct a status review of the species.

Respectfully submitted,

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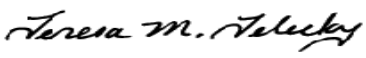
Jeff Flocken
International Fund for Animal Welfare
jflocken@ifaw.org
(202) 536-1904



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Teresa Telecky
Humane Society International
ttelecky@hsi.org
(301) 258-1430

Anna Frostic
Attorney for The Humane Society of the United States
The Fund for Animals
afrostic@humanesociety.org
(202) 676-2333

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Authors: Masha Kalinina, Humane Society International; Peter LaFontaine, International Fund for Animal Welfare; Mary Trainor, International Fund for Animal Welfare; Teresa Telecky, Humane Society International; Jeffrey Flocken, International Fund for Animal Welfare; Mark Hofberg, International Fund for Animal Welfare; Adam Peyman, Humane Society International; Anna Frostic, The Humane Society of the United States; and Marina Ratchford, independent wildlife consultant.

EXECUTIVE SUMMARY

This Petition demonstrates that the African elephant (*Loxodonta africana*) meets the statutory criteria for an Endangered listing under the Endangered Species Act (ESA).

The petitioners – The Humane Society of the United States, Humane Society International, The International Fund for Animal Welfare, and The Fund for Animals – submit this Petition to the Secretary of the Interior and the U.S. Fish and Wildlife Service requesting reclassification of the African elephant from Threatened to Endangered under the ESA. The ESA requires listing a species as "Endangered" when it "is in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6). As demonstrated herein, both of the two known subspecies of African elephant, the savanna elephant (*Loxodonta africana africana*) and the forest elephant (*Loxodonta africana cyclotis*), are facing catastrophic population declines, and elephants meet the definition of Endangered across their African range.

The Act requires the Secretary to determine within 90 days of receiving a petition whether the petition "presents substantial scientific or commercial information indicating that the petitioned action may be warranted." 16 U.S.C. § 1533(b)(3)(A). Such determination must be made solely on the basis of the "best scientific and commercial data available." 16 U.S.C. § 1533(b)(1)(A). Following a positive 90-day finding, the Secretary must, within one year of receipt of the Petition, complete a review of the status of the species, publish a finding of whether the action is warranted and, if so, promptly propose a rule to change the listing status. 16 U.S.C. § 1533(b)(3)(B). Should a rule be proposed, the Secretary has an additional year to finalize regulations protecting the species. 16 U.S.C. §1533(b)(6)(A).

Once a foreign species is listed as Endangered, protection under the ESA occurs by, *inter alia*, prohibiting import, export, and interstate commerce in live animals and parts derived from wild populations, unless such activity enhances the propagation or survival of the species or is for conservation science purposes. 16 U.S.C. § 1533(b)(1)(A). Furthermore, Section 8 of the ESA provides for "International Cooperation" in the conservation of foreign species, and listing a foreign species heightens global awareness about the importance of conserving the species.

This Petition describes the natural history and biology of the African elephant and the current status and distribution of the subspecies. The Petition evaluates the threats to the continued existence of the African elephant and shows that the species' population size is in alarming and precipitous decline due to rampant poaching, severe habitat loss, and commercial overutilization. The Petition also demonstrates how Americans engaging in unsustainable international trade of African elephants and their parts are negatively impacting the conservation status of the species. Existing laws and regulations are inadequate to address the numerous and interacting threats to the African elephant and listing the African elephant as Endangered is necessary to promote the conservation of the species, as required by law.

Status and Distribution

For over 30 years, the U.S. Fish & Wildlife Service (USFWS) has recognized that the African elephant (*Loxodonta africana*) is threatened with extinction.[1] The International Union for the Conservation of Nature (IUCN) also lists the species as Vulnerable[2] on its Red List of Threatened Species because it is considered to have a high risk of extinction in the wild (2008).[3]

In 1978, the USFWS found "at least 1.3 million" African elephants were "still in existence".[4] Using the best estimate of elephant numbers from systematic surveys[5] there were likely 523,872 elephants in Africa in 2012.[6] Thus, the best available science shows that the African elephant has suffered a population-wide decline of roughly 60% since the Service listed the African elephant as Threatened in 1978. This sharp decline is a result of habitat loss, poaching, commercial exploitation, trophy hunting, human-elephant conflict, regional conflict and instability, and climate change, which all presently combine to put the species in danger of extinction.[7] Indeed, the Secretariat for the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES) states that "poaching numbers in Africa remain at levels that are unsustainable, with mortality exceeding the natural birth rate, resulting in an ongoing decline in African elephant numbers."[8]

Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range

In addition to the African elephant's precipitous population decline, the species' range has contracted significantly as well. In 1979, the African elephant's range spanned 7.3 million km^2 (Figure 1).[9] As of 2007, African elephants inhabited only 3.3 million km^2 (Figure 2).[10] This is a

[1] 50 C.F.R. § 17.11; 43 Fed. Reg. 20499 (May 12, 1978).
[2] J. J. Blanc, 2008. *Loxodonta africana*. [hereinafter "Blanc, *Loxodonta africana*"]; *The IUCN Red List of Threatened Species. Version 2014.2.* (2008), www.iucnredlist.org [hereinafter "IUCN Red List 2014"].
[3] IUCN, *1994 Categories and Criteria (version 2.3). IUCN Red List of Threatened Species.* (1994), http://www.iucnredlist.org/technical-documents/categories-and-criteria/1994-categories-criteria [hereinafter "IUCN Red List 2.3"].
[4] 43 Fed. Reg. at 20500.
[5] J. J. Blanc, et al., African Elephant Status Report 2002: An Update from the African Elephant Database (IUCN/SSC African Elephant Specialist Grp. 2003), http://www.iucn.org/about/work/programmes/species/who_we_are/ssc_specialist_groups_and_red_list_authorities_directory/mammals/african_elephant/data/reports/?uPubsID=2749 [hereinafter "African Elephant Status Report 2002"].
[6] IUCN, *Elephant Database, 2012 Continental Totals* (2012), http://www.elephantdatabase.org/preview_report/2013_africa/Loxodonta_africana/2012/Africa [hereinafter "IUCN, *Elephant Database*"].
[7] UNEP et al., *A Rapid Response Assessment: Elephants in the Dust, the African Elephant Crisis.* United Nations Environment Program. (2013), http://www.cites.org/common/resources/pub/Elephants_in_the_dust.pdf [hereinafter "UNEP et al., *A Rapid Response*"].
[8] CITES, *Elephant Conservation, Illegal Killing, and Ivory Trade.* (2014). 10. Available at http://www.cites.org/sites/default/files/eng/com/sc/65/E-SC65-42-01_2.pdf [hereinafter "CITES, *Elephant Conservation*"].
[9] I. Douglas-Hamilton. 1979. African elephant ivory trade- Final report to the U.S. Fish and Wildlife Service. Typescript. As cited in CITES Doc. 7.43, Annex 2, the United Republic of Tanzania Proposal to Amendments to Appendices I and II, 1989 [hereinafter "Douglas-Hamilton, *Final Report*"]; *See also* Peter Jackson, *The Future of Elephants and Rhinos in Africa*. 11 Ambio 202-205 (2003).
[10] J. J. Blanc, et al., No. 33, African Elephant Status Report 2007: An Update from the African Elephant Database. Occasional Paper Series of the IUCN Species Survival Commission (IUCN/SSC African Elephant Specialist Grp. 2007),

54.8% range reduction over 28 years, and is attributable to factors such as increased human population density and industrial and agricultural development.[11]

As the human population continues to expand throughout the range of the African elephants, habitat loss and degradation are expected to continue to be a major threat to the survival of elephants. Expansive habitat is a prerequisite for healthy elephant populations, given their nature as a migratory animal and the heavy impacts they will cause on a landscape if a population is concentrated in one place for too long.

As African countries continue to modernize, "habitat encroachment, increased human population densities, urban expansion, agricultural development, deforestation and infrastructure development"[12] will likely continue to escalate and impact the long-term prognosis for the species. Already, this process of development has impacted nearly a third of existing elephant range, a figure that could double by 2050.[13] The issue of habitat loss is not merely one of temporary displacement of elephants by humans: land use patterns, such as the transformation of woodland or savanna to agricultural land, can have a major long-term impact on resident elephants.[14] Other threats to habitat and range for African elephants include human-elephant conflict, the effects of war and civil conflict, and climate change and desertification.

Overutilization for Commercial, Recreational, or Scientific Purposes

Analysis of trade in African elephants and their parts clearly shows that the species is overutilized. While international trade that is currently legal can be monitored via the CITES trade database, illegal trade is more difficult to precisely quantify. But there is a clear link between legal trade and illegal trade, and increased oversight of the international and domestic trade in ivory and other elephant parts and products is needed to bring the African elephant back from the brink of extinction.

Original analysis[15] presented in this Petition shows that between 2003 and 2012, net imports from all sources and for all legal purposes represented approximately 49,501 African elephants in international trade.[16] Net U.S. imports from all sources and for all legal purposes represented approximately 8,119 African elephants in international trade. The CITES decisions to approve sales of stockpiled ivory from Botswana, Namibia, Zimbabwe, and South Africa to Asian markets[17]

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http://www.iucn.org/about/work/programmes/species/who_we_are/ssc_specialist_groups_and_red_list_authorities_directory/mammals/african_elephant/data/reports/?uPubsID=3407 [hereinafter "African Elephant Status Report 2007"].

[11] UNEP et al., *A Rapid Response*.

[12] African Elephant Status Report 2007; *see also* African Elephant Status Report 2002.

[13] UNEP et al., *A Rapid Response* at 7.

[14] R. E. Hoare & J. T. Du Toit, *Coexistence Between People and Elephants in African Savannas,* 13Conservation Biology 633-639 (1999), http://www.researchgate.net/publication/227623128_Coexistence_between_People_and_Elephants_in_African_Savannas [hereinafter "Hoare & Du Toit, *Coexistence Between People and Elephants*"].

[15] The analysis consists of data compiled from the CITES Trade Database in October 2014, *available at* http://trade.cites.org/. CITES, *CITES Trade Database*, 2013 (2013), http://trade.cites.org/. (last visited Feb. 9, 2015).

[16] Note that there is a one-to-one ratio between trophy imports, body imports, and live imports and the number of elephants.

[17] CITES, *Illegal ivory trade driven by unregulated domestic markets*, 4 Oct. 2002, *available at* http://www.cites.org/eng/news/pr/2002/021004_ivory.shtml (last visited Feb 9, 2015) [hereinafter "CITES, *Illegal ivory trade*"].

stimulated international demand for elephant parts and creates confusion amongst consumers about the legal status of the elephant products in trade.[18] For example, after the 2008 sale, there was immediately an unprecedented spike in imports of ivory, and net imports of African elephant specimens have grown substantially since then.

Remarkably, the U.S. is one of the leading importers of African elephant specimens—predominantly for commercial, personal and hunting trophy purposes. Further, federal law enforcement officials routinely seize shipments of ivory directly from Africa, proving that the U.S. is an end market for illegal ivory products.[19] The U.S. plays a significant role in the overutilization of the species – large amounts of ivory are offered for sale on the domestic market that appear to have been carved after the 1989 CITES Appendix I listing, implying that they were illegally imported.[20]

The African elephant is in danger of extinction due to this overutilization for commercial and recreational purposes, and elephant poaching to supply this demand has reached a level that is not biologically sustainable.[21]

Inadequacy of Existing Regulatory Mechanisms

The African elephant is the subject of a large and varied body of law—including local, national, and international laws—much of which is designed to protect the species through mechanisms such as trade controls and direct prohibitions on take. Collectively, these laws and regulations have failed to prevent the drastic population loss and range declines the species is currently facing. For example, CITES suffers from inconsistent implementation and enforcement, with politics influencing Appendix listing decisions, and compliance failures. Additionally, CITES is not designed to control domestic markets, nor does it address non-trade related threats such as habitat loss. The Parties to CITES have also, on two separate occasions, undermined elephant conservation by sanctioning ivory stockpile sales. Other conventions such as the Convention on Migratory Species, regional efforts like the African Union and the Lusaka Agreement, as well as national laws in range, transit and consumer states, have all failed to protect the elephant from its current decline.

The U.S.—a significant ivory consumer country—only lists the species as Threatened under the ESA, with a "special rule" that allows significant trade in the species to continue without sufficient oversight of interstate and foreign commerce in ivory, hunting trophies, and other products. 50 C.F.R. § 17.40(e). The African Elephant Conservation Act (AfECA) created U.S.-sponsored conservation programs and additional international trade restrictions on ivory, and the Lacey Act criminalizes commercial activity in wildlife products illegally obtained, but neither of these two laws has the ability to meaningfully address the U.S. role in the current poaching crisis, as would

[18] CITES, *Ivory Auctions Raise 15 Million U.S.D. for Elephant Conservation* , http://www.cites.org/eng/news/pr/2008/081107_ivory.shtml (last visited Feb. 9, 2015) [hereinafter "CITES, *Ivory Auctions Raise 15 Million U.S.D.*"].
[19] Beth Allgood, et al., *U.S. Ivory Trade: Can a Crackdown on Trafficking Save the Last Titan?*, 20 Animal L. 27, 36 (2013) [hereinafter "Allgood et al., *U.S. Ivory Trade*"].
[20] D. Stiles & E. Martin, The U.S.A's Ivory Markets—How Much a Threat to Elephants?, 45 Pachyderm 67 (July 2008–June 2009), available at www.pachydermjournal.org/index.php/pachy/article/view/13/52 [hereinafter "Stiles & Martin, U.S.A.'s Ivory Markets"].
[21] CITES, Elephant Conservation, Illegal Killing, and Ivory Trade. (2014). 10. Available at http://www.cites.org/sites/default/files/eng/com/sc/65/E-SC65-42-01_2.pdf .

an Endangered uplisting for the species.

The Service recognized over a year ago that additional ESA regulation is needed to promote African elephant conservation and to meet the goals of the National Strategy for Combating Wildlife Trafficking (and issued Director's Order 210 to clarify implementation of existing law). But to date no such amendment for the African elephant ESA regulations has been formally proposed, and neither a change to the existing African elephant special rule (nor the recent changes to the U.S. CITES regulations) would be as beneficial to the species as a change in the listing status, from Threatened to Endangered.

Conclusion

This Petition demonstrates that the African elephant meets the criteria for listing as Endangered under the ESA and therefore the species must be uplisted. The best scientific and commercial data available demonstrate that the population and range of the African elephant have significantly decreased, and continue to decrease, and that the African elephant is in danger of extinction throughout "all or a significant portion of its range" based on the statutory listing factors. 16 U.S.C. §§ 1532(6), 1533(a).

The African elephant faces serious threats due to rampant poaching, loss of habitat, exploitation, retaliatory killings linked to human-elephant conflict, the effects of war and civil conflict, and climate change. Legal trade in African elephant products has stimulated demand for ivory that cannot be completely met by legal trade, subsequently driving the catastrophic increase in poaching. The species is not adequately protected by existing regulatory measures at national, regional or international levels. Listing the African elephant as Endangered under the ESA would be a meaningful step toward reversing the decline of the species by ensuring that the U.S. does not allow the importation of or interstate commerce in African elephants or their parts unless doing promotes the conservation of the species, and by raising global awareness about the alarming and increasingly precarious status of this iconic species.

I. INTRODUCTION

The African elephant (*Loxodonta africana*) is a globally recognized wildlife icon, one of the most intelligent and emotive animals in the world. It is also a species in crisis from both short and long term threats that endanger its future existence on the planet. Habitat loss, commercial exploitation, unsustainable trophy hunting, human-elephant conflict, and rampant poaching are all threats menacingly circling the species and putting it on the brink of extinction.

The United States has a vital role to play in saving the African elephant, and, as demonstrated in this petition, the Fish and Wildlife Service is legally required to uplist the species from Threatened to Endangered. The benefits that would accompany an Endangered listing under the Endangered Species Act—including limits on imports and exports linked to unnecessary killings for sport or commercial trade, an open and transparent review of elephant exploitation by Americans, and global attention on the poaching crisis —will all help this species recover.

II. STATUS AND DISTRIBUTION OF THE AFRICAN ELEPHANT

A. Status

The U.S. Fish and Wildlife Service listed the African elephant as Threatened under the Endangered Species Act (ESA) in 1978 (following a petition from The Fund for Animals). 43 Fed. Reg. 20499 (May 12, 1978).[22] As the Service recognized then, "the African elephant is among the world's most commercially valuable animals", "ivory hunting, mainly illegal, is the greatest immediate threat to the species", and that elephant populations "could be entirely wiped out, if large scale poaching continues."[23] In 1989, the Service considered a request to reclassify African elephants from Threatened to Endangered, following a petition from The Humane Society of the United States and other organizations – the Service acknowledged then that "the status of the African elephant has deteriorated substantially since the species was originally classified as threatened in 1978" due to "intensive poaching to obtain elephant ivory and subsequent international trade of this product."[24] Unfortunately, African elephant populations continue to decline due to intensive poaching and trafficking and are on the brink of being "wiped out".

Estimating current elephant population numbers can be difficult due to variances in data reliability and availability.[25] The IUCN Species Survival Commission's African Elephant Specialist Group periodically produces status updates on the African elephant. The most recent update, which includes data up to 2012,[26] relies on data from the African Elephant Database, which is considered the most reliable and authoritative source for data concerning African elephant populations.[27] In the Database, experts utilize a series of algorithms to account for data quality and survey reliability when categorizing data as DEFINITE, PROBABLE, POSSIBLE, and SPECULATIVE numbers of elephants.[28] These estimates are not cumulative, so for example a PROBABLE estimate does not include the DEFINITE estimate. Instead, the totals are minimum estimates that can be considered additively. Therefore, "in order to produce national, regional and continental totals, the variances of sample counts are added together in order to produce a 95% confidence interval … before allocation of the pooled estimates to the four groups."[29]

In 1979, the Service found that there are "at least 1.3 million of these animals still in existence."[30] Experts estimate that there were between 433,999 and 683,888 elephants in 2012.[31] Of this, 433,999 are categorized as DEFINITE, 89,873 are PROBABLE, 54,636 are POSSIBLE, and

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[22] The IUCN lists the species as Vulnerable on its Red List of Threatened Species because it is considered to have a high risk of extinction in the wild. Loxodonta africana; IUCN Red List 2014.2; IUCN Red List 2.3.
[23] 43 Fed. Reg at 20503.
[24] 54 Fed. Reg. 26812 (June 26, 1989). *See also* 56 Fed. Reg. 11392 (March 18, 1991) (proposing to list African elephants as endangered, except in Botswana, Zimbabwe, and South Africa); 57 Fed. Reg. 35473, 35474 (Aug. 10, 1992) (declining to grant additional protection to African elephants, based on the rational that "overexploitation seems to be controlled because of: (1) Enhanced anti-poaching activities, (2) the CITES appendix I listing, and (3) various ivory import moratoria. There is substantial evidence that the illegal offtake of elephants on a continent-wide basis is significantly reduced and is probably somewhat less than recruitment.").
[25] African Elephant Status Report 2007.
[26] IUCN, *Elephant Database.*
[27] IUCN, *Elephant Database*.
[28] African Elephant Status Report 2007 at 11.
[29] *Id*.
[30] 43 Fed. Reg. 20499.
[31] IUCN, *Elephant Database.*

105,380 are SPECULATIVE.[32] According to the 2007 *African Elephant Status Report* by Blanc et al., "the sum of these two categories [DEFINITE and PROBABLE] provides the 'best estimate'" of elephant numbers from systematic surveys."[33] Therefore, there were likely at least 523,872 elephants in Africa as of 2012.[34] Thus, the best available science shows that the species has suffered a population-wide decline of roughly 60% since the Service recognized (over 30 years ago) that the species is likely to become endangered.

Recent scientific studies indicate a downward trend in multiple African elephant populations across the continent.[35] As discussed in detail below, threats like habitat loss,[36] poaching,[37] human-elephant conflict,[38] institutional corruption,[39] and climate change,[40] presently combine to jeopardize the species' survival. Illegal trade is a primary concern at present, and the CITES Secretariat states that "poaching numbers in Africa remain at levels that are unsustainable, with mortality exceeding the natural birth rate, resulting in an ongoing decline in African elephant numbers."[41]

Although North Africa was once part of the African elephant's range, the species is now extinct in this region.[42] About 52% of Africa's DEFINITE and PROBABLE numbers of elephants are found in Southern Africa,[43] with most living in Botswana.[44] Eastern Africa holds slightly over 28% of the DEFINITE and PROBABLE population, and the majority of elephants in this region are located in Kenya and Tanzania.[45] West Africa contains 1.6% of Africa's DEFINITE and PROBABLE elephants, and while data are sparse for Central Africa populations, experts estimate that 17% of DEFINITE and PROBABLE elephants are located in this area.[46] Most of the DEFINITE and PROBABLE numbers of elephants in Central Africa are located in Congo, the

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[32] *Id.*
[33] African Elephant Status Report 2007 at 14.
[34] IUCN, *Elephant Database.*
[35] *See, e.g.*, Philippe Bouché et al., *Will Elephants Soon Disappear from West African Savannahs?* 6 PloS ONE (2011), http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0020619 [hereinafter "Bouché et al., *Will Elephants Soon Disappear*"]; CITES Secretariat, IUCN/SSC African Elephant Specialist Grp. & TRAFFIC Int'l, *Status of African Elephant Populations and Levels of Illegal Killing and the Illegal Trade in Ivory: A Report to the African Elephant Summit.* (2013), https://cmsdata.iucn.org/downloads/african_elephant_summit_background_document_2013_en.pdf [hereinafter "CITES, *Status of African Elephant Populations*"]; Fiona Maisels et al., *Devastating Decline of Forest Elephants in Central Africa*, 8 PLoS ONE (2013), http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone (last visited Nov. 4, 2014) [hereinafter "Maisels et al., *Devastating Decline*"]; UNEP et al. *A Rapid Response;* George Wittemyer et al., *Illegal Killing for Ivory Drives Global Decline in African Elephants*., 111 PNAS (2014), http://www.pnas.org/content/111/36/13117.abstract [hereinafter "Wittemyer et al., *Illegal Killing*"].
[36] UNEP et al., *A Rapid Response* at 15.
[37] UNEP et al., *A Rapid Response* at 32.
[38] UNEP et al., *A Rapid Response* at 41.
[39] UNEP et al., *A Rapid Response* at 41, 43.
[40] UNEP et al., *A Rapid Response* at 21.
[41] CITES, *Elephant Conservation* at 10.
[42] UNEP et al., *A Rapid Response* at 15.
[43] IUCN, *Elephant Database*.
[44] CITES, *Status of African Elephant Populations* at 2.
[45] IUCN, *Elephant Database*.
[46] IUCN, *Elephant Database.*

Democratic republic of Congo, and Gabon.[47] Population estimates are uncertain for Senegal, Somalia, and Sudan.[48]

Table 1: Population and Range Estimates for the African Elephant (2012)[49]

		Population Data				Range Data		
Region[50]	**Country**	**Definite**	**Probable**	**Possible**	**Speculative**	**Range Area (km²)**	**% of Regional Range**	**IQI[51]**
Central Africa	Cameroon	775	1,079	2,150	10,045	120,510	12	0.05
	Central African Republic	1,019	113	113	1,040	81,041	8	0.48
	Chad	454	0	2,000	550	149,443	15	0.04
	Congo	7,198	30,979	11,071	0	141,302	14	0.31
	Democratic Republic of Congo	1,708	3,036	5,099	3,831	276,209	27	0.16
	Equatorial Guinea	0	0	700	630	15,023	1	0
	Gabon	4,996	30,511	12,103	29,642	221,706	22	0.43
	Totals	**16,486**	**65,104**	**26,310**	**45,738**	**1,005,234**	**100**	**0.29**
Eastern Africa	Eritrea	96	0	8	0	5,275	1	0.92
	Ethiopia	628	0	220	912	38,417	4	0.24
	Kenya	26,365	771	3,825	5,299	111,423	13	0.68
	Rwanda	11	17	54	0	1,014	0	0.23
	Somalia	0	0	0	70	4,525	1	0
	South Sudan	1,172	5,882	5,882	0	309,897	35	0.19
	Tanzania	95,351	10,278	10,927	900	387,538	44	0.56
	Uganda	2,223	1,031	903	385	15,228	2	0.51
	Totals	**130,859**	**12,966**	**16,700**	**7,566**	**873,318**	**100**	**0.49**
Southern Africa	Angola	818	801	851	60	406,003	31	0.03
	Botswana	133,088	21,183	21,183	0	100,253	8	0.58

[47] CITES, *Status of African Elephant Populations* at 2.
[48] CITES, *Status of African Elephant Populations* at 2.
[49] Data from IUCN, *Elephant Database*. According to the African Elephant Database, "totals for the Definite, Probable, and Possible categories are derived by pooling the variances of individual estimates, as described at http://www.elephantdatabase.org/reliability. As a result, totals do not necessarily match the simple sum of the entries within a given category." Additionally, the percent of range assessed per country and the Priority for Future Surveys scores are available at IUCN, *Elephant Database.*
[50] Note that the African elephant was historically present in North Africa, but is now extinct in this region.
[51] IQI is the Information Quality Index. According to the African Elephant Database, "This index quantifies overall data quality at the regional level based on the precision of estimates and the proportion of assessed elephant range (i.e. range for which estimates are available). The IQI ranges from zero (no reliable information) to one (perfect information)." For more information, see http://www.elephantdatabase.org and African Elephant Status Report 2007 introduction.

	Malawi	865	218	218	1,043	7,539	1	0.41
	Mozambique	17,753	3,340	3,383	2,297	342,727	26	0.45
	Namibia	16,054	4,472	4,492	0	146,904	11	0.48
	South Africa	22,889	0	0	0	30,651	2	0.89
	Swaziland	35	0	0	0	50	0	1
	Zambia	14,961	2,975	3,111	542	201,246	15	0.6
	Zimbabwe	47,366	3,775	3,775	45,375	76,930	6	0.5
	Totals	**267,966**	**22,442**	**22,691**	**49,317**	**1,312,302**	**100**	**0.38**
Western Africa	Benin	916	48	188	0	13,672	8	0.44
	Burkina Faso	4,477	320	320	200	19,874	11	0.64
	Côte d'Ivoire	211	254	155	517	33,986	19	0.26
	Ghana	857	344	131	58	23,715	14	0.36
	Guinea	0	64	37	57	1,524	1	0.31
	Guinea Bissau	0	0	7	13	1,346	1	0
	Liberia	25	99	99	1,363	15,977	9	0.05
	Mali	344	0	0	0	31,881	18	1
	Niger	85	0	17	0	2,683	2	0.83
	Nigeria	0	0	108	667	22,968	13	0
	Senegal	1	0	0	9	1,090	1	0.1
	Sierra Leone	0	0	80	135	1,804	1	0
	Togo	4	0	61	0	5,032	3	0.05
	Totals	**7,107**	**942**	**931**	**3,019**	**175,552**	**100**	**0.44**

i. West Africa

When assessing regional elephant populations, researchers and managers have been concerned for decades about populations in West Africa. It is likely that populations in this region are not viable because they are genetically isolated, small, and have unnatural age structures and sex ratios as a result of hunting.[52] Furthermore, some West African elephant populations have shown signs of widespread decline.[53] For example, a 2011 study suggests that populations of savanna elephants in West Africa have decreased by at least 33% between 1980-83 and 2003-07.[54] The impacts of high poaching levels and intense human-elephant conflict in the area are particularly worrisome.[55]

[52] African Elephant Status Report 2007 at 166.
[53] UNEP et al., *A Rapid Response* at 22.
[54] Bouché et al., *Will Elephants Soon Disappear* at 5.
[55] IUCN, *Elephant Database.*

ii. Central Africa

When the Service listed the African elephant as Threatened in 1978, Central Africa's populations were considered "still substantial."[56] The population's health has since significantly diminished and a severe downward trend continues.

Recently, Wittemyer (2014) found that Central African elephant populations declined a staggering 62%-63.7% between 2002 and 2012.[57] More specifically, Bouché et al. (2011) concluded that populations of Central African savanna elephants have decreased 76% since the late 1980s,[58] and Maisels et al. (2013) showed that the region's forest elephant populations decreased 62% between 2002 and 2011 alone.[59] Additionally, despite supposed protection, elephant populations have decreased in multiple Central African parks including Bayang-Mbo Wildlife Sanctuary in Cameroon, Zakouma National Park in Chad, and Odzala Kokoua National Park in Congo.[60]

Levels of poaching (determined by Proportion of Illegally Killed Elephants, or PIKE, data) have been sufficiently high since 2007 to indicate a net decline for elephant populations in Central Africa.[61] In addition to poaching, habitat fragmentation threatens populations in this region.[62]

iii. Eastern and Southern Africa

Until recently, it was believed that populations in Eastern and Southern Africa were stable or increasing.[63] When the species' IUCN Red List status was last reevaluated (back in 2008), assessors concluded that anticipated population increases in these areas would offset population declines in the West or Central regions.[64] However, Wittemyer (2014) found that Eastern and Southern savanna populations declined between 2011 and 2012 due to illegal hunting for ivory.

Poaching is a threat in both elephant populations in Eastern and Southern Africa. According to PIKE data, poaching in Eastern Africa's three largest populations (Laikipia Samburu in Kenya, Tsavo in Kenya, and Selous Mikumi in Tanzania) was above a sustainable threshold in 2011.[65] Habitat fragmentation and alteration are also ongoing threats in the area.[66] While Southern Africa was previously considered safe from poaching, 2011 PIKE data indicate that poachers have infiltrated the region and are operating at an unsustainable level.[67] Human-elephant conflict also threatens elephant populations in the area.[68]

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[56] 43 Fed. Reg. at 20500.
[57] Wittemyer et al., *Illegal Killing* at 2.
[58] Bouché et al., *Will Elephants Soon Disappear* at 5.
[59] Maisels et al., *Devastating Decline* at 3.
[60] CITES, *Status of African Elephant Populations* at 2.
[61] IUCN, *Elephant Database.*
[62] IUCN, *Elephant Database.*
[63] Blanc, *Loxodonta africana*; UNEP et al., *A Rapid Response* at 6.
[64] Blanc, *Loxodonta africana.*
[65] IUCN, *Elephant Database.*
[66] IUCN, *Elephant Database.*
[67] IUCN, *Elephant Database.*
[68] IUCN, *Elephant Database.*

B. Distribution

African elephants can survive in most habitats across sub-Saharan Africa including savannas, forests, and deserts.[69] In 1979 the species' range spanned 7.3 million km^2 (Figure 2).[70] As of 2007, African elephants inhabited 3.3 million km^2 (Figure 3).[71] This is a 54.8% range reduction over 28 years, beginning in 1978 when the USFWS listed the African elephant as Threatened, and available range continues to decline.

The African Elephant Database lists 2,302,782 km^2 of KNOWN range and 1,062,544 km^2 of POSSIBLE range,[72] for a combined 3,365,326 km^2. KNOWN range is defined as "areas in suitable habitat which, if searched with reasonable intensity, are likely to yield signs of elephant presence."[73] POSSIBLE range is defined as "areas within historical range and in suitable habitat where there are no negative data to rule out the presence of elephants, including former areas of KNOWN range where the source information is more than 10 years old."[74] When taken together, KNOWN and POSSIBLE elephant range estimates cover 15% of the continent.[75] As of 2007, 31% of KNOWN and POSSIBLE range was in protected areas;[76] however, not all protected areas reliably offer security from human-caused mortalities.[77]

African elephant range has likely been in decline for more than three decades.[78] This decrease is attributable to factors like habitat loss and increased human population density.[79] Elephant distribution is becoming progressively more fragmented over time,[80] and habitat reduction is expected to continue, further reducing elephant range.[81] While improvements in data collection have furthered our understanding of elephant range today, there is no doubt that the species is suffering from severe habitat loss.[82]

[69] UNEP et al., *A Rapid Response* at 15.
[70] Douglas-Hamilton, *Final Report* at 12.
[71] African Elephant Status Report 2007 at 21.
[72] IUCN, *Elephant Database*.
[73] IUCN, *Elephant Database*.
[74] IUCN, *Elephant Database*.
[75] Assuming Africa is 22,617,267 km^2 as stated in African Elephant Status Report 2007 at 21.
[76] African Elephant Status Report 2007 at 21.
[77] African Elephant Status Report 2007 at 26, 166.
[78] Douglas-Hamilton, *Final Report* at U.S. 12 (1989); UNEP et al., *A Rapid Response.*
[79] UNEP et al., *A Rapid Response* at 15.
[80] Blanc, *Loxodonta africana.*
[81] UNEP et al., *A Rapid Response* at 17.
[82] African Elephant Status Report 2007.

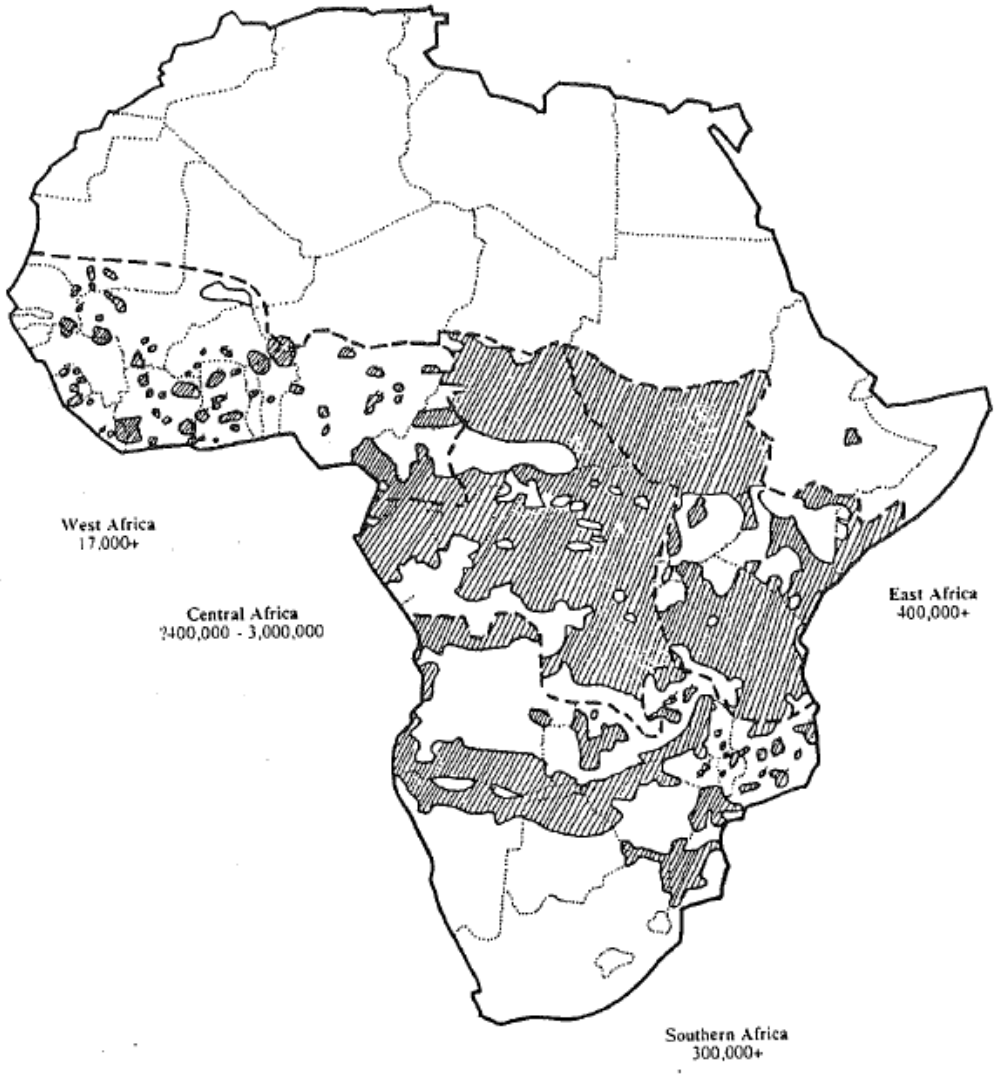

Figure 2. Range map of the African elephant in 1979.[83]

[83] From IUCN/UNEP/WWF (1982) as cited in CITES Doc. 7.43, Annex 2, the United Republic of Tanzania Proposal to Amendments to Appendices I and II, page 7 (1989).

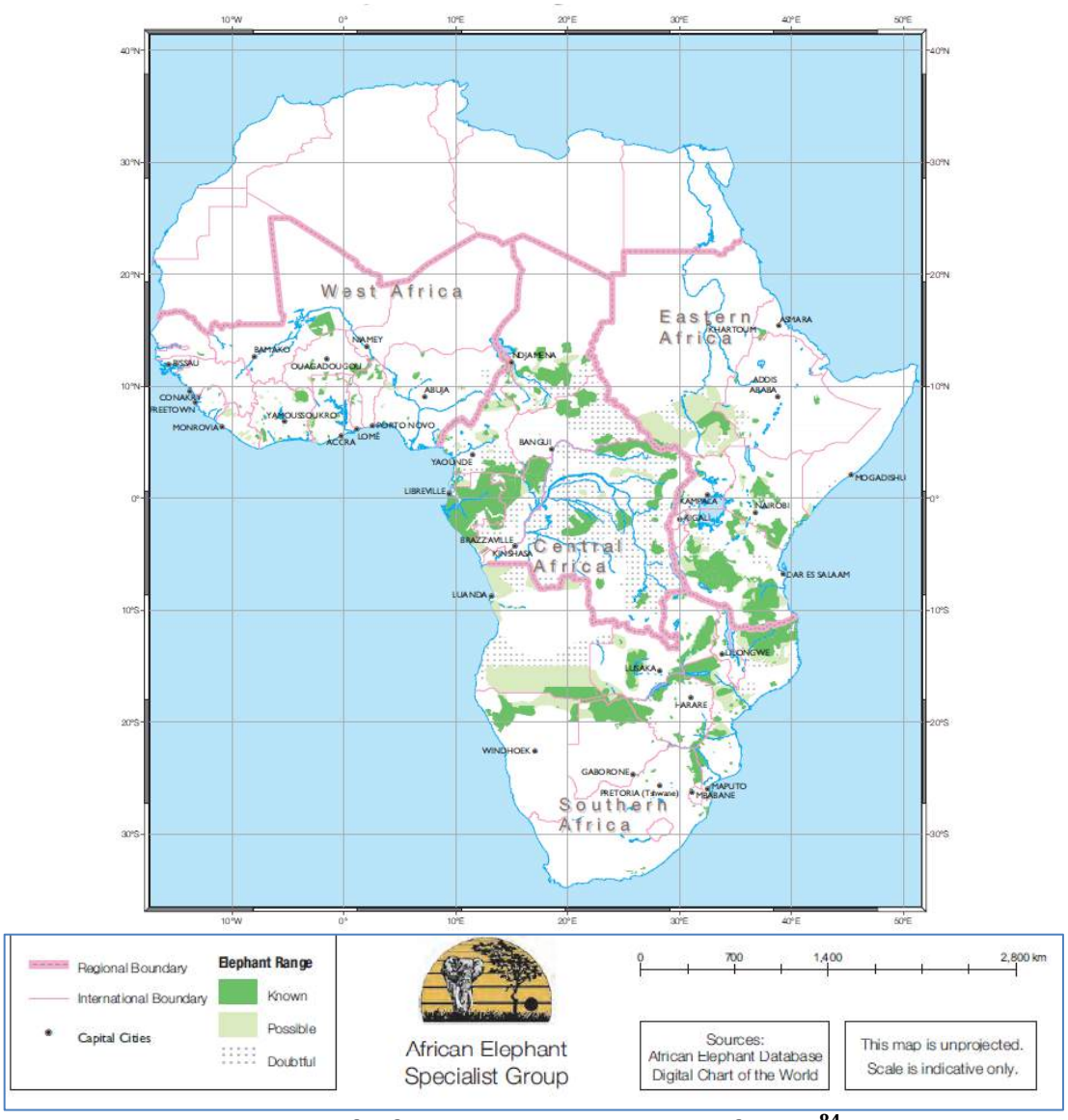

Figure 3: Map of African elephant range as of 2007.[84]

Note: The African Elephant Specialist Group notes that "only small adjustments were made to the range map" for the upcoming 2013 report (unpublished at the time this petition was submitted).[85]

i. North Africa

African elephants are now extinct in this region.[86]

[84] African Elephant Status Report 2007 at 25. Note that a high resolution version of the map is available by contacting the African Elephant Specialist Group. See http://www.elephantdatabase.org/ for more information.
[85] IUCN, *Elephant Database*.
[86] UNEP et al., *A Rapid Response* at 15.

ii. West Africa

Elephants are found in small, fragmented populations in the savanna, forest, and tropical forest habitats of West Africa.[87] Historically it was believed that savanna and forest elephants existed here, but recent genetic research suggests that the elephants in West Africa may be genetically distinct.[88]

According to the most recent assessment by the African Elephant Specialist Group (2012), West Africa has the smallest total elephant range, containing 175,552 km^2 or only 5% of the continental range.[89] Côte d'Ivoire and Mali have 19% and 18% of the region's elephant range, respectively.[90] The remaining 11 countries all have less than 15% of the regional range, and four account for 1% each (Sierra Leone, Senegal, Guinea and Guinea Bissau).[91] As of 2007, 56% of elephant range in West Africa was located inside designated protected areas.[92] Unfortunately, these "protected areas" often have more protection on paper than in practice.[93]

The largest population of West African elephants in West Africa is found in the Warly-Pendjari-Oti-Mandori-Kéran (WAPOK) ecosystem.[94] WAPOK is a protected ecosystem that crosses the Benin, Burkina Faso, Niger, and Togo borders.[95]

West Africa may share some populations with Central Africa, particularly across Nigeria, Cameroon, and Chad's borders.[96]

iii. Central Africa

According to the latest African Elephant Specialist Group assessment (2012), African elephant range covers 1,005,234 km^2 (30% of the continental range) in Central Africa.[97] Together the Democratic Republic of Congo and Gabon contain 49% of the region's African elephant range.[98] Equatorial Guinea may account for 1% of the range, and the African Central Republic contains 8%.[99] The remaining range (42%) is split almost equally between Cameroon, Congo, and Chad.[100] Elephants may move between the Democratic Republic of Congo, Sudan, and Uganda in Central and Eastern Africa as well as between Cameroon and Nigeria in Central and West Africa.[101] As of

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[87] African Elephant Status Report 2007 at 162.
[88] Lori S. Eggert et al., *The evolution and phylogeography of the African elephant inferred from mitochondrial DNA sequence and nuclear microsatellite markers*, 289 Proceedings Royal Soc'y, London (B) (2006), http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1691127 [hereinafter "Eggert et al., *The evolution and phylogeography of the African elephant*"], as cited in African Elephant Status Report 2007 at 162.
[89] All total range estimates include KNOWN and POSSIBLE range from IUCN, *Elephant Database.*
[90] IUCN, *Elephant Database.*
[91] IUCN, *Elephant Database.*
[92] African Elephant Status Report 2007 at 162.
[93] African Elephant Status Report 2007 at 166.
[94] African Elephant Status Report 2007 at 166.
[95] African Elephant Status Report 2007 at 166.
[96] African Elephant Status Report 2007 at 166.
[97] All total range estimates include KNOWN and POSSIBLE range from IUCN, *Elephant Database*.
[98] IUCN, *Elephant Database*.
[99] IUCN, *Elephant Database.*
[100] IUCN, *Elephant Database*.
[101] African Elephant Status Report 2007 at 30.

2007, 33% of KNOWN and POSSIBLE range in Central Africa existed within designated protected areas.[102] This does not offer as much security from poaching as expected because enforcement and management are absent in a number of parks and reserves in the area.[103]

The majority of African elephants in Central Africa are forest elephants, but savanna elephants can be found in northern Cameroon, northern Central African Republic, and Chad.[104] Northern and eastern Democratic Republic of Congo and Central African Republic are potential areas of hybridization between the two subspecies.[105]

While a specific number documenting Central African range-wide decline is currently unavailable, consider the following results of a 2013 study by Maisels et al.[106] analyzing Central African forest elephants: Maisels et al. estimate that Central African forest elephants have experienced a range reduction of approximately 30% between 2002 and 2011.[107] It appears that the Central African forest elephant population now inhabits less than 25% of its potential range,[108] and the population's range is expected to continue to shrink in the future due to habitat loss and poaching for ivory.[109]

iv. Southern Africa

The most up-to-date data (2012) from African Elephant Specialist Group indicates that Southern Africa accounts for the largest total range area (1,312,302 km^2 or 39% of the continental range).[110] Most notably, Angola accounts for 31% of the regional range, and Mozambique holds 26%.[111] As of 2007, 28% of this range was in protected areas.[112]

Most elephants found in Southern Africa are savanna elephants.[113] Small numbers of forest elephants are present in the Angolan exclave of Cabinda and possibly northwestern Angola.[114] The Southern Africa countries of Angola, Botswana, Zambia, Zimbabwe, and Namibia share elephant populations in the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA).[115] In regards to regional cross-border populations, some move between Mozambique and Tanzania (Eastern Africa) and others may migrate between Angola and the Democratic Republic of Congo (Central Africa).[116]

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[102] African Elephant Status Report 2007 at 26.
[103] African Elephant Status Report 2007 at 26.
[104] African Elephant Status Report 2007 at 26.
[105] African Elephant Status Report 2007 at 26.
[106] Maisels et al., *Devastating Decline.*
[107] Maisels et al., *Devastating Decline* at 3.
[108] Maisels et al., *Devastating Decline* at 1, 3.
[109] Maisels et al., *Devastating Decline* at 7.
[110] All total range estimates include KNOWN and POSSIBLE range from IUCN, *Elephant Database.*
[111] IUCN, *Elephant Database*.
[112] African Elephant Status Report 2007 at 111.
[113] African Elephant Status Report 2007 at 112.
[114] African Elephant Status Report 2007 *s* at 112.
[115] For more information, see http://www.britannica.com/EBchecked/topic/1883803/Southern-Africas-Kavango-Zambezi-Transfrontier-Conservation-Area-Year-In-Review-2012/.
[116] African Elephant Status Report 2007 at 116.

v. Eastern Africa

The African Elephant Specialist Group's most recent assessment (2007) states that the total elephant range in Eastern Africa is 873,318 km^2 (26% of the continental total).[117] Of that, Tanzania accounts for 44% of the population's regional range, and South Sudan has 35%.[118] Kenya has 14% of the regional elephant range, and Eritrea, Ethiopia, Rwanda, Somalia, and Uganda account for less than 5% each.[119] As of 2007, 30% of this range existed in protected areas.[120]

Savanna elephants are present in the grasslands, woodlands, coastal and mountain forest areas of Eastern Africa, while forest elephants may be found along the region's western edge.[121] Some populations exist on the borders between Eastern and Central Africa as well as Eastern and Southern Africa.[122] Unconfirmed anecdotal evidence indicates that elephants may move into Sudan from Ethiopia and Eritrea.[123]

[117] All total range estimates include KNOWN and POSSIBLE range from IUCN, *Elephant Database.*
[118] IUCN, *Elephant Database.*
[119] IUCN, *Elephant Database.*
[120] African Elephant Status Report 2007 at 67.
[121] African Elephant Status Report 2007 at 67.
[122] African Elephant Status Report 2007 at 68.
[123] IUCN, *Elephant Database.*

III. NATURAL HISTORY AND BIOLOGY OF THE AFRICAN ELEPHANT

A. Taxonomy

The African elephant (*Loxodonta africana*) is the only extant species in the *Loxodonta* genus of the family *Elephantidae*. The African elephant shares the *Elephantidae* family with the Asian elephant (*Elephas maximus*) along with several extinct species including the mastodon and the wooly mammoth.

The African elephant species consists of two extant subspecies: the African savanna elephant (*Loxodonta africana africana*) and the African forest elephant (*Loxodonta africana cyclotis*). A third, smaller subspecies, the North African elephant (*Loxodonta africana pharaoensis*), went extinct during the time of the Roman Empire.

There has been some scientific debate over whether there is a possible third subspecies of elephant in West Africa,[124] and whether there is more than one *species* of elephant in Africa,[125,126,127,128] but the international community has reached consensus that "premature allocation of Africa's elephants to two or more species may result in significant populations being left in taxonomic limbo" and that this should be avoided (especially since populations of great conservation value include individuals of mixed genetic lineage).[129]

B. Species description

The African savanna elephant is the largest land mammal on earth, with males reaching upwards of three meters and females reaching 2.5 meters at the shoulder.[130] The species is characterized by large ears, a highly mobile and dexterous trunk, and large tusks. African elephants are also highly sexually dimorphic with divergence of growth rates apparent by the age of weaning.[131] African forest elephants are slightly smaller at two meters (males) and 1.5 meters (females) high at the

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[124] IUCN SSC African Elephant Specialist Grp., *Statement on the Taxonomy of Extant Loxodonta.* (2003), http://www.iucnredlist.org/documents/AfESGGeneticStatement.pdf.
[125] K. E. Comstock et al., 2002. Patterns of molecular genetic variation among African elephant populations. Molecular Ecology 11: 2489-2498 [hereinafter "Comstock et al., *Patterns of molecular variation*"].
[126] A. L. Roca et al. 2001. Genetic evidence for two species of elephant in Africa. Science 293: 1473-1477, http://www.ncbi.nlm.nih.gov/pubmed/11520983 [hereinafter "Roca et al., *Genetic evidence for two species*"];
[127] Eggert et al., *The evolution and phylogeography of the African elephant.*
[128] R. DeBruyne. 2005. A case study of apparent conflict between molecular phylogenies: the interrelationships of African elephants. Cladistics 21: 31-50, http://www.researchgate.net/publication/227610163_A_case_study_of_apparent_conflict_between_molecular_phylogenies_the_interrelationships_of_African_elephants, [hereinafter "DeBruyne, *A case study*"].
[129] IUCN SSC African Elephant Specialist Grp., *Statement on the Taxonomy of Extant Loxodonta.* (2003), http://www.iucnredlist.org/documents/AfESGGeneticStatement.pdf.
[130] B. J. Morgan & P. C. Lee. 2003. Forest elephant (*Loxodonta africana cyclotis*) stature in the Réserve de Faune du Petit Loango, Gabon. Journal of Zoology of London 259: 337-344 , http://www.researchgate.net/publication/227730071_Forest_elephant_%28Loxodonta_africana_cyclotis%29_stature_in_the_Rserve_de_Faune_du_Petit_Loango_Gabon [hereinafter "Morgan & Lee, *Forest elephant stature*"].
[131] P.C. Lee, & C. J. Moss. 1986. Early maternal investment in male and female African elephant calves. Behavioral Ecology and Sociobiology 18: 353-361, http://www.researchgate.net/publication/225904541_Early_maternal_investment_in_male_and_female_African_elephant_calves.

shoulder.[132] Forest elephants also have longer, thinner, and straighter tusks, smaller and rounder ears, and a flatter forehead region than savanna elephants.[133,134,135,136]

African savanna elephants form matriarch-led herds.[137] Males will leave the herd for bachelor groups at the onset of sexual maturity.[138] African forest elephants are found in smaller groups. Males tend to be solitary while females form family groups with their calves and sometimes other females.[139]

C. Reproduction and mortality

African elephants are a very long-lived species, regularly living past 60 years.[140] They also have a very slow reproduction rate with a long gestation period (22 months) and calving intervals between three to five years depending on resource availability.[141,142] Calves of both sexes maintain close proximity to their mothers until they are 6-8 years of age.[143] Individuals do not reach sexual maturity until around age 14 for females and 15 for males, but individuals will continue to reproduce well past 40 with average fecundity dropping fast after 45.[144,145]

Adult African elephants are relatively immune to predation due to their size and close-knit family groups.[146,147] Elephant calves are vulnerable to predation, but only if they are separated from the

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[132] *Morgan & Lee, Forest elephant stature.*
[133] Comstock et al., *Patterns of molecular variation.*
[134] Roca et al., *Genetic evidence for two species.*
[135] *Eggert et al., The evolution and phylogeography of the African elephant.*
[136] DeBruyne, *A case study*.
[137] I. O. Buss. 1961. Some observations on food habits and behavior of the African elephant. Journal of Wildlife Management 25: 131-148 [hereinafter "Buss, *Some observations on food habits*"].
[138] J. Hanks. 1972. Reproduction of elephant, *Loxodonta africana*, in the Luangwa Valley, Zambia. Journal of Reproduction and Fertility 30: 13-26, http://www.ncbi.nlm.nih.gov/pubmed/5035330 [hereinafter "Hanks, *Reproduction of elephant*"].
[139] B. J. Morgan, B. & P. C. Lee. 2007. Forest elephant group composition, frugivory and coastal use in the Réserve de Faune du Petit Loango, Gabon [hereinafter "Moran & Lee, *Forest elephant group composition*"].
[140] C. J. Moss. 2001. The demography of an African elephant (*Loxodonta africana*) population in Amboseli, Kenya. Journal of Zoology of London 255: 145-156, http://www.researchgate.net/publication/231860029_The_demography_of_an_African_elephant_%28Loxodonta_africana%29_population_in_Amboseli_Kenya.
[141] Hanks, *Reproduction of elephant.*
[142] *Moss, The demography of an African elephant.*
[143] A. M. Shrader, et al. 2005. Growth and age determination of African savanna elephants. Journal of Zoology 270: 40-48, http://www.researchgate.net/publication/227635679_Growth_and_age_determination_of_African_savanna_elephants [hereinafter "Shrader, *Growth and age determination*"].
[144] Hanks, *Reproduction of elephant.*
[145] *Moss, The demography of an African elephant.*
[146] A.J. Loveridge, et al. 2006. Influence of drought on predation of elephant (*Loxodonta africana*) calves by lions (*Panthere leo*) in an African wooded savannah. Journal of Zoology 270: 523-530 [hereinafter "Loveridge et al., *Influence of drought on predation*"].
[147] R.J. Power & R. X. S. Compion. 2009. Lion predation on elephants in the Savuti, Chobe National Park, Botswana. African Zoology 44: 36-44, http://www.researchgate.net/publication/232693088_Lion_Predation_on_Elephants_in_the_Savuti_Chobe_National_Park_Botswana [hereinafter "Power & Compion, *Lion predation on elephants*"].

herd or if the herd is weakened by drought.[148,149] Natural mortality becomes significant during drought events.[150,151] Human induced mortality from poaching, hunting, and culling is the most common cause of death for elephants.[152,153]

D. Feeding

African savanna elephants subsist on grasses and woody vegetation.[154] The proportion of grass to woody vegetation depends on several factors including rainfall, proximity of the vegetation to surface water, and nutritional characteristics.[155,156] Diet can vary significantly with rainfall as relative abundance of woody and grassy vegetation changes. African forest elephants also subsist on woody vegetation and grasses, but fruit and bark make up a significant portion of their diet.[157,158]

E. Habitat requirements

African elephants can inhabit Africa's diverse grasslands, savanna, and forests. Elephants require ample vegetation and water to survive, especially in drier ecosystems.[159,160] In arid and semi-arid savannas, population numbers, home range sizes, and density will rise and fall with vegetation and surface water availability during the dry season.[161,162] Forest dwelling elephants also require mineral resources such as salt deposits for sodium.[163] Both forest and savanna subspecies need to utilize large swaths of landscape throughout the year and may travel hundreds of kilometers to satisfy nutrition and hydration needs.[164,165]

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[148] Loveridge et al., *Influence of drought on predation*.
[149] Power & Compion, *Lion predation on elephants*.
[150] J.P. Dudley et al. 2001. Drought mortality of bush elephants in Hwange National Park, Zimbabwe.
[151] C. Foley et al. 2008. Severe drought and calf survival in elephants. Biology Letters 4: 541-544, http://rsbl.royalsocietypublishing.org/content/4/5/541 [hereinafter "Foley et al., *Severe drought and calf survival in elephants*"].
[152] Blanc, *Loxodonta africana*; J. The IUCN red list of threatened species. Version 2014.3. <www.iucnredlist.org>. Accessed on 14 January 2015.
[153] I. Douglas-Hamilton, 1987. African elephants: population trends and their causes. Oryx 21: 11-24.
[154] Buss, *Some observations on food habits.*
[155] R. F. W. Barnes. 2008. Elephant feeding behavior in Ruaha National Park, Tanzania. African Journal of Ecology 20(2): 123-136. African Journal of Ecology 39: 187-194.
[156] J. J. Codron, J. et al. Elephant (*Loxodonta africana*) diets in Kruger National Park, South Africa: spatial and landscape differences. Journal of Mammalogy 87(1): 27-34, http://www.jstor.org/discover/10.2307/4094559?sid=21105301145761&uid=70&uid=2129&uid=4&uid=3739584&uid=2&uid=3739256.
[157] Morgan & Lee, *Forest elephant group composition*.
[158] L. J. T. White et al. 2008. Group composition and diet of forest elephants, *Loxodonta africana cyclotis* Matschie 1900, in the Lope Reserve, Gabon.
[159] Loveridge et al., *Influence of drought on predation.*
[160] *Blanc, Loxodonta africana*.
[161] S. Chamaillé-Jammes et al. 2007. Managing heterogeneity in elephant distribution: interactions between elephant population density and surface-water availability. Journal of Applied Ecology 44: 625-633.
[162] R. Van Aarde et al. 2008. Elephant population biology and ecology In: RJ Scholes and KG Mennell (eds) Elephant management: A scientific assessment of South Africa. Witwatersrand University Press, Johannesburg [hereinafter "Van Aarde, *Elephant population biology and ecology*"].
[163] Morgan & Lee, *Forest elephant group composition.*
[164] Van Aarde, *Elephant population biology and ecology.*
[165] Morgan & Lee, *Forest elephant group composition*.

IV. CRITERIA FOR LISTING THE AFRICAN ELEPHANT AS ENDANGERED

The Supreme Court has described the Endangered Species Act (ESA) as "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation". *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 180 (1978). In that landmark case, the Court stated that:

> [t]he plain intent of Congress in enacting this statute was to halt and reverse the trend towards species extinction, whatever the cost. This is reflected not only in the stated policies of the Act, but in literally every section of the statute.[166]

As demonstrated in this Petition, the African elephant is currently in danger of extinction throughout a significant portion of its range due to the statutory listing factors. Accordingly, the Secretary of the Interior must act to halt and reverse the current trends towards extinction for the African elephant by listing the species as Endangered under the ESA and strictly regulating the American demand for elephant parts and products.

Pursuant to the ESA, a species must be listed as Endangered if any of the following five factors put the species in danger of extinction throughout all or a significant portion of its range: (1) The present or threatened destruction, modification, or curtailment of its habitat or range; (2) Overutilization for commercial, recreational, scientific, or educational purposes; (3) Disease or predation; (4) Inadequacy of existing regulatory mechanisms; or, (5) Other natural or manmade factors affecting its existence.[167]

The ESA requires that all listing determinations be made "solely on the basis of the best scientific and commercial data available to [the Secretary] after conducting a review of the status of the species."[168] Further, the Service must take into account whether there are any efforts being made by foreign nations to protect the species.[169] As detailed in this Petition, the African elephant is currently in danger of extinction throughout a significant portion of its range and this iconic species could be extirpated if the U.S. does not take action to address its role in the ongoing poaching crisis by reclassifying the species as Endangered.[170]

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[166] 437 U.S. 184.

[167] 16 U.S.C. § 1533(a)(1)(A)-(E); 50 C.F.R. § 424.11(c)(1)-(5).

[168] 16 U.S.C. § 1533(b)(1)(A). *See also New Mexico Cattle Growers v. U.S. Fish & Wildlife Service*, 248 F.3d 1277, 1284-85 (10th Cir. 2001) (quoting H.R. Rep. No. 97-567, pt. 1 at 29 (1982), "'The addition of the word 'solely' is intended to remove from the process of listing or delisting of species any factor not related to the biological status of the species.'"); H.R. Conf. Rep. No. 835, 97th Cong. 2d Sess. 19-20 (1982) (the limitations on the factors the Service may consider in making listing decisions were intended to "ensure that decisions . . . pertaining to listing . . . are based solely upon biological criteria and to prevent nonbiological considerations from affecting such decisions.").

[169] 16 U.S.C. § 1533(b)(1)(A).

[170] *See also Carlton v. Babbitt*, 900 F.Supp. 526 (D.D.C. 1995) (when evaluating a petition to reclassify a species from threatened to endangered, the Service must consider all of the evidence in the record, especially evidence related to increases in human-caused mortalities); 5 U.S.C. § 706(2)(A-D) (mandating that ESA listing determinations must not be arbitrary, capricious, an abuse of discretion, not in accordance with law, or unsupported by an articulated rational connection between facts found and the decision made).

A. Present or threatened destruction, modification, or curtailment of habitat or range

As detailed above, the range of the African elephant has decreased from 7.3 million km^2 in 1979 to only 3.3 million km^2 in 2007, a 54.8% decrease over 28 years, and this unsustainable trend continues today.

As human population continues to expand throughout the range of the African elephants, habitat loss and degradation are expected to continue to be a major threat to the survival of elephants. Expansive habitat is a prerequisite for healthy elephant populations, given their nature as a migratory animal and the heavy impacts they will cause on a landscape if a population is concentrated in one place for too long.

Numerous factors contribute to elephant habitat loss – according to Blanc et al. (2007), these include "habitat encroachment, increased human population densities, urban expansion, agricultural development, deforestation and infrastructure development."[171] As African countries continue to modernize, these issues will likely continue to escalate and impact the long-term prognosis for the species.[172] Already, this process of development has impacted nearly a third of existing elephant range, a figure that could double by 2050.[173] Poaching exacerbates this trend, but even if poaching rates are minimized, human development – with associated threats like human-elephant conflict and habitat fragmentation[174] – "will continue to threaten the long term survival of elephant populations across Africa,"[175] according to the United Nations Environment Programme (UNEP).

The issue of habitat loss is not merely one of temporary displacement of elephants by humans: land use patterns, such as the transformation of woodland or savanna to agricultural land, can have a major long-term impact on resident elephants.[176] Coexistence, while a worthy goal, may simply be unrealistic in some cases. The IUCN/SSC African Elephant Specialist group warns that "the rapid growth of human populations and the extension of agriculture into rangelands and forests formerly considered unsuitable for farming mean that large areas are now permanently off-limits for elephants."[177]

As a result of habitat degradation and loss, some elephant populations may soon be found only in protected areas. However, island biogeography theory predicts that a species will be lost if it is relegated to habitat "islands."[178] For example, many Tanzanian parks are rapidly becoming habitat

[171] African Elephant Status Report 2007; African Elephant Status Report 2002.
[172] UNEP et al., *A Rapid Response* at 15.
[173] UNEP et al., *A Rapid Response* at 7.
[174] R. Beyers, Future Elephant Declines Inevitable Given Habitat Loss, Human Population Growth and Human-Elephant Conflict, (A Voice for Elephants 2014) (in "Opinion: Irrelevant, Illogical, and Illegal–24 Experts Respond to Arguments Supporting Legalization of the Ivory Trade"), http://newswatch.nationalgeographic.com/2014/10/02/opinion-irrelevant-illogical-and-illegal-24-experts-respond-to-arguments-supporting-legalization-of-the-ivory-trade/ [hereinafter "Beyers, *Future Elephant Declines Inevitable*"].
[175] UNEP et al., *A Rapid Response* at 7.
[176] Hoare & Du Toit, *Coexistence Between People and Elephants*.
[177] IUCN/SSC African Elephant Specialist Group, http://www.iucn.org/about/work/programmes/species/who_we_are/ssc_specialist_groups_and_red_list_authorities_directory/mammals/african_elephant/; Hoare & Du Toit, *Coexistence Between People and Elephants*.
[178] R. H. MacArthur & E. O.,, R.H. AND Wilson, E. O., The Theory of Island Biogeography (Princeton Univ. Press 1967),

islands as a result of human settlement, agricultural development, and the active elimination of wildlife on adjacent lands. A study of six Tanzanian parks points out that the rate of extinction of mammals over the last 35-83 years is significantly and inversely related to park area, suggesting that increasing insularization of the parks has been an important contributory factor in large mammal extinctions, particularly in the smaller parks.[179]

a. Leading causes of habitat or range loss and related threats

i. Human-elephant conflict

According to the IUCN, expanding human development in elephant range has led to a "reported increase in human-elephant conflict, which further aggravates the threat to elephant populations."[180] Elephants migrate seasonally, and if those patterns are disrupted by human settlements or other barriers, it may lead to direct conflicts or make it more difficult for elephants to access food and water."[181] The process of habitat fragmentation often forces elephant populations into a diminishing patchwork of suitable terrain, making human-elephant conflict more likely as the barriers constrict.

In many African nations today, citizens view the real and perceived costs of human-elephant conflict as greatly outweighing the potential benefits of coexistence and, subsequently, elephants are increasingly being excluded from many parts of their former range.[182] Elephants can be seen as a pest species, especially for agricultural producers. Crop raiding is the most common cause of conflict between humans and elephants in Africa.[183,184,185] However, elephants are responsible for a small component of overall pest damage when compared to smaller mammals and insects.[186,187] Furthermore, elephant crop raiding is relatively rare and localized near wildlife reserves and other

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http://books.google.com/books?id=a10cdkywhVgC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false.

[179] W. D. Newmark, *Insularization of Tanzanian Parks and the Local Extinction of Large Mammals*, 10 Conservation Biology No. 6, Special Issue: Festschrift for Michael E. Soule 1549-1556 and abstract (1996).

[180] IUCN Red List of Threatened Species, Loxodonta Africana, http://www.iucnredlist.org/details/full/12392/0. (Accessed January 16, 2015) [hereinafter "IUCN Red List, Loxodonta Africana"].

[181] UNEP et al., *A Rapid Response*.

[182] IUCN/SSC African Elephant Specialist Group.

[183] F. V. Osborn & G. E. Parker. 2003. Towards an integrated approach for reducing the conflict between elephants and people: a review of current research. Oryx 37: 80-84, http://www.researchgate.net/publication/231890223_Towards_an_integrated_approach_for_reducing_the_conflict_between_elephants_and_people_a_review_of_current_research [hereinafter "Osborn & Parker, *Towards an integrated approach*"].

[184] W. Twine & H. Magome . 2008. Interactions between elephants and people In: RJ Scholes and KG Mennell (eds) Elephant Management: A Scientific Assessment of South Africa. Witwatersrand University Press, Johannesburg.

[185] C. R. Thoulless. 1994. Conflict between humans and elephants on private land in northern Kenya. Oryx 28: 119-127 [hereinafter "Thoulless, *Confllict between humans and elephants*"].

[186] W. D. Newmark, et al.. 1994. The conflict between wildlife and local people living adjacent to protected areas in Tanzania: human density as a predictor. Conservation Biology 8: 249-255 [hereinafter "Newmark, *The conflict between wildlife and local people*"].

[187] L. Naughton et al.. 1999. The social dimensions of human-elephant conflict in Africa: a literature review and case studies from Uganda to Cameroon. Report to the African Elephant Specialist Group, Human-elephant Conflict Task Force. IUCN, Gland, Switzerland, http://www.academia.edu/6492725/The_social_dimensions_of_human-elephant_conflict_in_Africa_A_literature_review_and_case_studies_from_Uganda_and_Cameroon [hereinafter "Naughton et al., *The social dimensions*"].

protected areas.[188,189] But small subsistence farmers tend to bear the brunt of negative effects.[190] Even localized and rare events are catastrophic for small subsistence farmers who cannot bear the costs.[191,192] Furthermore, elephants are physically powerful and dangerous, occasionally injuring or killing farmers who defend their crops.[193,194,195] As stated in the UNEP report *Elephants in the Dust*, "crop raiding or attacks on humans by elephants in rural areas may lead to retaliation killings. While the number of elephants that die in such conflicts is much lower than the numbers poached for ivory, hundreds of elephants are killed every year as a result of human-elephant conflict."[196]

Farmers, non-profit groups, and governments employ many types of mitigation strategies including fencing and buffer zones around reserves.[197] Most elephant-caused crop damage occurs on the borders of protected areas, leading to strategies that include locating farms away from the border, switching to animal husbandry near the borders, and assuring that revenue from tourism on reserves is used to mitigate costs of damage caused by elephants and other wildlife.[198]

ii. The effects of wars and civil conflict on African elephant habitat

Many regions of Africa have a history of wars and civil conflict, and the present era is no exception, with violence flaring up across equatorial Africa and other areas in the last decade.[199] Conservation efforts decline as security becomes a concern and funds are funneled elsewhere.[200] African elephants are specifically affected by war and civil conflict through increased poaching.[201] As the rule of law is weakened, even elephants that are usually protected in parks or by anti-poaching laws become vulnerable to poaching.[202] Furthermore, elephant ivory, which is already extremely valuable, becomes an even more prized resource because it can be used to generate

[188] Naughton et al., *The social dimensions.*
[189] L. Naughton-Treves. 1998. Predicting patterns of crop damage by wildlife around Kibale National Park, Uganda. Conservation Biology 12: 156-168 [hereinafter "Naughton-Treves, *Predicting patterns of crop damage*"].
[190] Newmark, *The conflict between wildlife and local people.*
[191] Newmark, *The conflict between wildlife and local people.*
[192] Naughton-Treves, *Predicting patterns of crop damage.*
[193] Thoulless, *Confllict between humans and elephants.*
[194] K. M. Dunham et al. 2010. Human-wildlife conflict in Mazambique: a national perspective, with emphasis on wildlife attacks on humans. Oryx 44: 185-193, http://www.researchgate.net/publication/231827044_Humanwildlife_conflict_in_Mozambique_a_national_perspective_with_emphasis_on_wildlife_attacks_on_humans.
[195] R. Hoare. 2000. African elephants and humans in conflict: the outlook for co-existence. Oryx 34: 34-38.
[196] UNEP et al., *A Rapid Response* at 41.
[197] Osborn & Parker, *Towards an integrated approach.*
[198] Newmark, *The conflict between wildlife and local people.*
[199] UNEP et al., *A Rapid Response* at 56.
[200] T. Hanson, et al. 2009. Warfare in biodiversity hotspots. Conservation Biology 23: 578-587, http://www.academia.edu/1438784/Warfare_in_biodiversity_hotspots.
[201] R. L. Beyers, et al. 2011. Resource wars and conflict ivory: the impact of civil conflict on elephants in the Democratic Republic of Congo – the case of the Okapi Reserve. PLoS ONE 6: e27129, http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0027129 [hereinafter "Beyers et al., *Resource wars and conflict ivory*"].
[202] M. J. Chase & C. R. Griffin. 2011. Elephants of south-east Angola in war and peace: their decline, re-colonization and recent status. African Journal of Ecology 49: 353-361 [hereinafter "Chase & Griffin, *Elephants of south-east Angola*"].

revenue that can be directed toward weapons, ammunition, and supplies.[203] According to Dudley et al. (2002),), "There is now overwhelming evidence that wars and other forms of human conflict disturb ecosystems and cause the loss of biodiversity. This loss is particularly acute with large species."[204] Beyers et al. (2011) have found that "the African elephant is one of the most vulnerable to human conflict as it requires large areas of suitable habitat, and so suffers from habitat loss."[205] Furthermore, as habitat is reduced and elephants are forced to live in smaller areas, they become easier targets for ivory and meat hunters.

In parts of Africa, chronic regional conflicts have created long periods of dangerous climates for conservationists and unchecked poaching in protected areas. In particular, civil war in the Democratic Republic of Congo resulted in decimated populations of African elephants, where several parks have lost over half of their elephant populations during the war and in the post-war anarchy.[206] Beyers et al. (2011) found that in DRC, "all elephant populations suffered during the war of 1995-2006. Displaced peoples resulted in significant habitat loss, as occurred in the Virunga National Park, DRC, where an area of 300 km^2 was deforested during the refugee crisis following the genocide in Rwanda in 1994."[207] Another example is in southern Africa, where Angola's 27 years of intermittent conflict has been linked to reports of 100,000 elephants exterminated by rebel groups.[208] The weapons and supplies gained from smuggling ivory can go towards militia groups that further destabilize war-torn regions of Africa, contributing more to an environment that imperils elephants and other wildlife.[209] With more resources, the militia groups can develop sophisticated smuggling pathways, equip better weapons, and expand infrastructure.[210]

iii. Climate change and desertification

The Food and Agriculture Organization (FAO) defines desertification as "[the] sum of the geological, climatic, biological and human factors which lead to the degradation of the physical, chemical and biological potential of lands in arid and semi-arid zones, and endanger biodiversity and the survival of human communities."[211] As part of this process, scientists believe that climate

[203] Chase & Griffin, *Elephants of south-east Angola*.
[204] J. P. Dudley et al., *Effects of War and Civil Strife on Wildlife and Wildlife Habitats*, 16 Conservation Biology No. 2 319-329 (2002), http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CCsQFjAB&url=http%3A%2F%2Fwww.researchgate.net%2Fprofile%2FAndrew_Plumptre%2Fpublication%2F227655490_Effects_of_War_and_Civil_Strife_on_Wildlife_and_Wildlife_Habitats%2Flinks%2F00463513f2810817ac000000.pdf&ei=YBPZVMXnKKvIsQTG4YFY&usg=AFQjCNFr7_ctQcb8d3DI_h8DunKZWQTC2A&sig2=GgV7qItoeHHpC46HIdLzEw&bvm=bv.85464276,d.cWc.
[205] Beyers et al., *Resource wars and conflict ivory*.
[206] Beyers et al., *Resource wars and conflict ivory*.
[207] Beyers et al., *Resource wars and conflict ivory*.
[208] *Chase and Griffin 2011*.
[209] International Fund for Animal Welfare. 2013. Criminal nature: the global security implications of illegal wildlife trade 2013. Retrieved January 16, 2014 from < http://www.ifaw.org/united-states/resource-centre/criminal-nature-global-security-implications-illegal-wildlife-tra-0>
[210] IFAW, *Criminal nature*.
[211] See FAO Corporate Document Repository, *Definition and general approach to the problem*, available at http://www.fao.org/docrep/v0265e/v0265e01.htm.

change will increase the frequency of severe droughts in semi-arid and arid parts of Africa,[212] and that it will threaten certain elephant populations.[213]

Climate change and desertification are already resulting in higher levels of human-elephant conflict, poaching, and habitat fragmentation in parts of Africa.[214] As a result, climate change-induced desertification and drought are already considered to be some of the most pressing threats to elephants in Chad[215] and in the Sudano-Sahelian region.[216]

In addition to human-elephant conflict, poaching, and habitat loss, severe droughts brought on by climate change threaten elephant populations. Consider the following example wherein a 2008 study examined the effects of a severe drought in Tanzania in 1993.[217] Foley et al. (2008) found that the average annual calf mortality rate for the studied population was 2%.[218] However, 20% of monitored calves died during the year of the drought.[219] Foley et al. (2008) found that young males and the calves of inexperienced mothers were the most vulnerable.[220] These results are supported by a study by Lee et al. (2013) that assessed 2,652 African elephants over 40 years.[221] Lee et al. (2013) found that African elephants that endure droughts when young and are born to inexperienced mothers have a higher rate of mortality.[222]

b. Regional assessments of threats to habitat or range

i. West African region

West Africa has seen a dramatic reduction in elephant range and total population, with habitat fragmentation restricting elephants to "about 70 small isolated populations that cover only 5% of the region" according to research by Barnes (1999).[223] Barnes found that fragmentation in the region magnifies the vulnerability of elephant populations to ivory poaching and other human threats, while those animals that are nominally protected still reside in parks and reserves that suffer from poor management and porous boundaries, and that "two-thirds of the populations are thought to consist of fewer than 200 animals and therefore have a low probability of surviving the next century" especially as human populations grow and infringe on elephant territory.[224]

ii. Central African region

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[212] Foley et al., *Severe drought and calf survival in elephants.*
[213] UNEP et al., *A Rapid Response*
[214] African Elephant Status Report 2007.J.
[215] African Elephant Status Report 2007.
[216] P. Bouché et al., *Game over! Wildlife collapse in northern Central African Republic*. 184 Environmental Monitoring and Assessment (2011), available at http://www.ncbi.nlm.nih.gov/pubmed/22170159.
[217] Foley et al., *Severe drought and calf survival in elephants.*
[218] Foley et al., *Severe drought and calf survival in elephants.*
[219] Charles Foley et al., *Severe drought and calf survival in elephants*.
[220] Foley et al., *Severe drought and calf survival in elephants.*
[221] P.C. Lee et al. 2013. *Enduring consequences of early experiences: 40 year effects on survival and success among African elephants (Loxodonta africana).* Royal Society Publishing, http://www.ncbi.nlm.nih.gov/pubmed/23407501 [hereinafter "Lee et al. *Enduring consequences of early experiences*"].
[222] Lee et al. *Enduring consequences of early experiences*.
[223] R. F. W. Barnes, *Is There a Future for Elephants in West Africa?* 29 Mammal Rev.Issue 3 175-200 (1999) (adapted from) [hereinafter "Barnes, *Is There a Future for Elephants in West Africa?*"].
[224] Barnes, *Is There a Future for Elephants in West Africa?*

The situation is similarly dire for the elephants of Central Africa, particularly forest elephants. A seminal analysis by Maisels et al. (2013) "revealed that population size declined by nearly 62% between 2002–2011, and the taxon lost 30% of its geographical range. The population is now less than 10% of its potential size, occupying less than 25% of its potential range."[225] Reflecting the patterns found elsewhere on the continent, changing land use patterns, human elephant conflict, and other human-driven habitat reductions are primary threats (along with poaching). Civil strife overlapping with historic elephant range is particularly evident in CAR, South Sudan, and several other countries in the region.[226]

The Elephant Listening Project at Cornell University states that natural resource extraction industries are having particularly detrimental effects on Central Africa's elephants, as these activities destroy habitat and increase human presence.[227] Roads and other infrastructure associated with these projects increase access to previously-isolated regions of the forest, making it easier for poaching and opportunistic hunting to occur.[228]

iii. Southern African region

Southern Africa is sometimes considered the safest area for elephants on the continent, with less elephant poaching compared to other regions. However, a large-scale poaching incident recently resulted in poisoning deaths of approximately 300 elephants in Hwange National Park in Zimbabwe,[229] which demonstrates that elephants in the region are still endangered by poachers. Habitat fragmentation remains a problem and could have implications for future conservation efforts. Similarly, human population growth and the spread of extractive industries could alter the situation for the worse and bears close observation.

iv. East African region

The USFWS asserts that "in East Africa, elephant populations have decreased by 65% due to poaching and land conversion."[230] Somalia, Ethiopia, and Kenya have seen widespread civil conflict in the last decade, and Mozambique is still recovering from its civil war, which ended in 1992. Kenya and Tanzania have relatively large extant elephant populations, but encroachment by humans is a growing problem: for example, in their study of the Mount Kenya/Laikipia ecosystem, Nyaligu and Weeks (2013) assert that livestock grazing, charcoal burning, and other activities "threaten the integrity of the property and undermine the values of the ecosystem in the medium and long term."[231]

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[225] Maisels et al., *Devestating Decline*.
[226] UNEP et al., *A Rapid Response*.
[227] CORNELL LAB/THE ELEPHANT LISTENING PROJECT, THREATS TO FOREST ELEPHANTS, http://www.birds.cornell.edu/brp/elephant/conservation/threats.html [hereinafter "Cornell Lab, *Threats to Forest Elephants*"].
[228] Cornell Lab, *Threats to Forest Elephants.*
[229] Joe DeCapua , *Cyanide Kills Elephants, Ecosystem*, Voice of America, Nov 1, 2013, available at http://www.voanews.com/content/elephants-cyanide-1nov13/1781504.html.
[230] USFWS, *African Elephant Conservation Fund Fact Sheet*, available at http://www.fws.gov/international/pdf/factsheet-african-elephant.pdf.
[231] M. Nyaligu & S. Weeks , An Elephant Corridor in a Fragmented Conservation Landscape: Preventing the Isolation of Mount Kenya National Park and National Reserve. PARKS Vol. 19.1 (2013) (95), available at

In conclusion, the African continent is in the midst of an unprecedented boom in human population and development that is often in direct struggle with the goal of sustaining healthy populations of elephants and other wildlife. Civil conflict and war, coupled with increased access to formerly-remote elephant habitat, exposes African elephants to unpredictable violence on a massive scale. Human-driven impacts extend to climate change and desertification, which will exert further pressure on the natural environment. And while many African nations have established wildlife reserves with varying degrees of protection, habitat fragmentation is contributing to isolated elephant populations, human-elephant conflict, and the inevitable degradation (by elephants) of the very landscapes in which they are confined. All of these elements combine to create a pessimistic outlook for the survival of the species if aggressive conservation measures are not immediately put in place.

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https://cmsdata.iucn.org/downloads/parks_19_1_nyaligu___weeks.pdf.

B. Overutilization for commercial, recreational, or scientific purposes

Analysis of trade in African elephants and their parts shows that the species is clearly overutilized. While international trade that is currently legal can be monitored via the CITES trade database, illegal trade is more difficult to precisely quantify. But there is a clear link between legal trade and illegal trade, and increased oversight of ivory and other elephant parts and products is needed to bring the African elephant back from the brink of extinction.

The African elephant has been listed on Appendix I of CITES since 1990, except for the populations of Botswana, Namibia and Zimbabwe (listed on Appendix II since 1997)[232] and South Africa (listed on Appendix II since 2000).[233] Pursuant to the Convention, species listed on Appendix I are threatened with extinction and are or may be affected by trade. International trade in specimens of species listed on Appendix I for primarily commercial purposes is prohibited under CITES.[234] Species listed on Appendix II are not necessarily threatened with extinction but may become so unless trade is closely controlled.[235] Specimens must be accompanied by an export permit or a re-export certificate. Permits and certificates should only be granted if the relevant authorities are satisfied that certain conditions are met, above all that trade will not be detrimental to the survival of the species in the wild.[236]

The 181 CITES Parties[237] are required to file Annual Reports with the CITES Secretariat on the import and export of listed species. These reports are compiled into an electronic, searchable trade database by the United Nations Environment Programme, in cooperation with the World Conservation Monitoring Centre (UNEP-WCMC), which is available to the public on the CITES website (www.trade.cites.org). This database can be used to determine the level of legal international trade as well as the types and sources of African elephants and their parts that are involved, and the purpose of the trade. In the context of CITES, international trade is not limited to commercial trade,[238] but also includes international trade associated with various purposes including breeding, circus or travelling exhibition, education, enforcement, trophy hunting, medicinal, personal use, reintroduction, scientific research, and for zoological exhibition.

By examining purposes of trade, the CITES trade database can be used to evaluate the reasons behind the movement of African elephants and their parts across international borders by humans. The database also includes the source of African elephants and their parts in international trade, whether captive-bred,[239] captive-born,[240] confiscated or seized, pre-Convention,[241] ranch-raised,

[232] CITES, *African Elephant*, http://www.cites.org/eng/gallery/species/mammal/african_elephant.html (last visited Jan. 12, 2015) [hereinafter "CITES, *African Elephant*"]
[233] CITES, *African Elephant*.
[234] Convention on International Trade in Endangered Species of Wild Fauna and Flora art. 3, Mar. 3, 1973, http://www.cites.org/eng/disc/text.php#III, [hereinafter "CITES art. 3"].
[235] CITES art. 3.
[236] CITES, *CITES 'Non-detriment findings'*, http://www.cites.org/eng/prog/ndf/index.php (last visited Jan. 12, 2015).
[237] CITES, *List of CITES Contracting Parties*, http://www.cites.org/eng/disc/parties/alphabet.php (last visited Nov. 4, 2014).
[238] In the context of CITES, "commercial" means that the purpose of trade, in the country of import, is to obtain economic benefit (whether in cash or otherwise), and is directed toward resale, exchange, provision of a service or any other form of economic use or benefit.
[239] "Offspring of second generation, F2, or subsequent generation, (F3, F4, etc.) are specimens produced in a controlled environment from parents that were also produced in a controlled environment" (CITES Resolution Conf. 10.16 (Rev.) (CITES 1994), http://www.cites.org/eng/res/10/10-16C15.php (last visited Nov. 4, 2014) [hereinafter

wild, or from an unknown source. While the CITES trade database is the principal source of information on international trade in African elephants and their parts, it does not contain information on domestic use of African elephants or their parts for commercial, recreational, or scientific purposes; nor does it account for the significant volume of poaching and illegal trade, except where illicit international trade has resulted in a seizure and this has been reported by the relevant country in their CITES Annual Report.

a. International legal trade in African elephants and their parts is extensive

i. Methodology and preliminary comments

a. CITES database

This section of the petition presents original analysis of data on the legal trade in African elephant parts. Raw net import data was obtained from the CITES Trade Database on September 29th 2014. Raw gross import data was obtained on November 7th 2014. Finally, additional information on gross imports of skins was obtained on January 19th, 2015.

It must be noted that the CITES Trade Database has several limitations. First, the database includes data reported by CITES member states (Parties) which, for various reasons, may not always be accurate. For example, it is often the case that importing and exporting countries international trade figures do not match even though they refer to the same specimens in trade. Second, the data cannot be used to determine the extent of the illegal trade because illegal trade is, by its very nature, not recorded; the exception is specimens that are seized, which may be recorded by Parties in their CITES Annual Reports.

Third, while the analysis presented below primarily focuses on the ten year time span between 2003 and 2012, the African elephant products traded during that time, as reflected in the CITES database, may not have been sourced from elephants that died naturally or were killed in that same time period. Specimens in trade may have been sourced from stockpiles of these products that were taken from elephants killed or that died during different time periods. The CITES database does not provide information on the age of the traded specimen.

Fourth, when collecting CITES database information, one must select between gross exports, gross imports, net exports or net imports. According to CITES, net trade "first calculates a country's gross (re-)exports and gross imports, and then gives the positive difference between the two values" and "aims to give an estimate of the actual number of items being traded."[242] However, when researching trade data into or from a specific country, only gross trade can be calculated. According to CITES in gross trade "quantities reported by the exporter and importer are compared

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"CITES Resolution Cond. 10.16"].

[240] "First generation offspring, f1, are specimens produced in a controlled environment from parents at least one of which was conceived in or a taken from the wild" CITES Resolution Cond. 10.16.

[241] In the context of CITES, "pre-Convention" means before the provision of CITES applied to that specimen. CITES Resolution Conf. 13.6, http://www.cites.org/eng/res/13/13-06.shtml). Resolution Conf. 13.6 (Rev. CoP16) (CITES 1985), http://www.cites.org/eng/res/13/13-06R16.php (last visited Nov. 4, 2014).

[242] CITES, A guide to using the CITES Trade Database, Version 8 (Oct. 2013), *available at* http://trade.cites.org/cites_trade_guidelines/en-CITES_Trade_Database_Guide.pdf (last visited Jan. 28, 2015) [hereinafter "CITES Trade Database Guide"].

and the larger quantity is presented in the output. This type of output aims to give an estimate of the total number of items recorded in international trade."[243] In this petition analysis, net imports are calculated for all cases except with respect to data on international trade by specific source country, in which case gross imports are calculated. As CITES explains "if your data selection only involves imports to, or exports from, specified countries, you cannot calculate net imports or exports, as not all the data necessary for the calculation will be available."[244]

Finally, the database presents trade data with and without units of measurement (i.e., kilograms, grams, feet squared, meters squared, milliliters, centimeters, etc.), complicating the calculation to estimate the number of elephants whose parts are in international trade. Some data are presented in terms of numbers, sets, and pairs, among other terms, which give no indication as to weight or size of the specimens. An example is that the U.S. may report that 5 ivory carvings were imported during a certain year but does not indicate the weight of the carvings. Therefore in order to determine the number of elephants involved in international trade, a calculation was developed and is described below.

b. Extrapolating the Number of Elephants from Trade Data

In order to calculate the number of elephants reflected by the ivory specimens traded, this analysis focuses on the weight of ivory carvings, ivory pieces, ivory scraps, and tusks. Since each elephant has two tusks, and the average weight of two tusks is 6.66 kg according to Wasser et al. (2009),[245] this means that every 6.66 kg of ivory in trade is the equivalent of one elephant. Therefore, the total weight in kilograms of ivory traded analyzed in various parts of this section is divided by 6.66 to calculate the number of elephants. Ivory without a measurable unit, apart from tusks (see next paragraph), is not included in the calculations below because there is no way to determine its weight from available information.

Tusks[246] that do not have a weight value are taken into account in this analysis in the following manner. Total tusk specimens reported without weight and analyzed in various parts of this section are divided by two to calculate the number of African elephants and this figure is added to the number of elephants reflected by the total weight of ivory in trade.

Finally, three additional figures are added to the total number of estimated elephants: trophies, bodies, and live animals (no unit). Where one specimen of each of these terms is reported in the CITES database, this petition's analysis equates this to one African elephant. Although this may be obvious in the case of the body or a live elephant, trophies are also equivalent to one elephant. Trophies are identified as TRO in CITES trade terms, described as follows:

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[243] CITES Trade Database Guide.
[244] CITES Trade Database Guide.
[245] Wasser S., et al., Combating Trans-National Organized Crime Using DNA Assignment of Poaching Hotspots (2009), *available a*t http://isfg2013.org/wp-content/uploads/2012/06/Thu-P3-1505-S-Wasser-M1.pdf (A study sponsored by U.S. Fish & Wildlife Service, University of Washington Center for Conservation Biology, International Fund for Animal Welfare, and the U.S. National Institute for Justice.) [hereinafter "Wasser et al., *Combating Trans-National Organized Crime*"].
[246] According to the CITES guidelines for the preparation and submission of CITES annual reports (February 2011), a tusk is defined as "substantially whole tusks, whether or not worked." CITES Guidelines for the Preparation and Submission of CITES Annual Reports, Feb. 2011, *available at* http://www.cites.org/eng/notif/2002/022A.pdf [hereinafter "CITES Guidelines"].

> Trophy – all the trophy parts of one animal if they are exported together: e.g. horns (2), skull, cape, back skin, tail and feet (i.e. ten specimens) constitute one trophy. But if, for example, the skull and horns are the only specimens of an animal that are exported, then these specimens together should be recorded as one trophy. Otherwise the specimens should be recorded separately. A whole stuffed body is recorded under 'BOD'. A skin alone is recorded under 'SKI'.[247]

Because one trophy generally consists of the parts of one dead elephant, this analysis equates one trophy to one African elephant.

It must also be highlighted that there are many African elephant items traded beyond ivory, trophies, bodies, and live animals. For example, this includes leather, skins, and items made from skin, such as shoes, all of which currently are sold on the open market in the U.S. However, it is much more difficult to estimate the number of elephants reflected by the trade in these items either because they lack a measurable unit, because the measurable units vary (length vs. weight of the skins), and because it is challenging to estimate the average size of an elephant's skin. Also, any elephant whose skin is in international trade may already be accounted for in this analysis by the other tradable parts of the elephant, such as ivory. Therefore this analysis focuses on ivory weight, tusks, trophies, bodies, and live animals in its calculations, but does not include skins, leather, and other skin items when calculating total African elephants impacted by international trade.

c. Organization of the section on international legal trade in African elephant and their parts

The subsequent section on international legal trade in African elephants and their parts is organized into three main sections: (1) net imports from all sources and for all purposes, (2) net imports from wild sources and for all purposes, and (3) top three purposes of international trade in African elephants. Each of these three sections is divided into a subsection on estimated elephants in trade (broken down by the estimates according to (a) global imports, and (b) U.S. imports) and calculated specimens in trade (also broken down by (a) global imports, and (b) U.S. imports). Lastly the same format is applied to the top three purposes of international trade, which are: commercial, hunting trophy, and personal.

Following this analysis, this section next reviews international (legal) trade in African elephants and their parts by source country, with subsections included on Zimbabwe, Botswana, South Africa, Namibia, Tanzania, Zambia, Cameroon, Ghana, Gabon, Mozambique, and Kenya.

Illegal trade in African elephants and their parts is discussed separately.

ii. Net Imports[248] from All Sources and for All Purposes

[247] CITES Guidelines.

[248] In the CITES Trade Database, the user is prompted to select one of the following report types: gross exports, gross imports, net exports or net imports. A *net* trade output first calculates a country's gross (re-)exports and gross imports, and then gives the positive difference between the two values. This type of output aims to give an estimate of the actual number of items being traded. CITES Trade Database Guide.

1. Estimated elephants in trade (all sources and all purposes)

Global imports: The original analysis[249] presented in this Petition estimates that between 2003 and 2012 the total of African elephants reflected by the reported international trade (global net imports from all sources and for all purposes) is 49,501. The calculations are detailed below.

In terms of measurable units, net elephant product imports during the 2003-2012 year span included 206,760 kilograms (kg) (206.7 metric tons) of ivory (calculation: 8,040.5kg ivory carvings + 43,917.8kg ivory pieces + 1,018.32kg ivory scraps + 153,783.3kg tusks = 206,760kg).[250] Using an average tusk weight of 6.66 kg per tusk, this represents 31,045 African elephants (calculation: 206,760 kg ÷ 6.66 kg = 31,045 estimated elephants).

When this number of elephants is combined with imports without a measurable unit, including the number of net trophy imports (8,593), body imports (119), and live imports (509) between the years 2003-2012, the total number of African elephants in international trade in that time span is 40,266.[251] (Calculation: 31,045 + 8,593 +119 + 509 = 40,266 estimated elephants).

Moreover, net imports of 18,471 tusks were reported between 2003 and 2012 without any unit indicated. However, one can still estimate the number of elephants potentially impacted by the imports. Elephants have two tusks and therefore two tusks are equal to one elephant. If one divides 18,471 tusks by two tusks per elephant that amounts to an estimated 9,235.5 elephants. Combing this total with 40,266 elephants calculated above, brings the total of African elephants reflected by the reported international trade between 2003 and 2012 to 49,501 (calculation: 31,045 + 9,235 + 8,593 + 119 + 509 = 49,501 estimated elephants). See Table 2.

Note that all elephant number estimates represent the minimum because another large category of items traded are skins and it is not possible to estimate how many elephants are represented by the skin trade based on the CITES Trade Database.

Table 2: Global Net Imports and Estimated Numbers of Elephants, All Sources and All Purposes (2003-2012)

All Specimens	Ivory kg	Tusk specimens	Trophies	Bodies	Live	Total Elephants
281,428 (no unit)	206,760 kg ÷ 6.66 kg (avg. weight per tusk) = 31,045 elephants	18,471 (no unit) ÷ 2 (number of tusks per elephant) = 9,235 elephants	8,593 trophies = 8,593 elephants	119 bodies = 119 elephants	509 live = 509 elephants	49,501

[249] The analysis represented consists of data compiled from the CITES Trade Database on September 29, 2014. CITES Trade Database Guide.

[250] This figure was derived by adding up the weight figures (in kg) for three types of specimens including ivory carvings, ivory pieces, ivory scraps, and tusks, as reported in the UNEP-WCMC CITES Trade Database when searching for "net imports" all sources, and all purposes. Other measurable units such as pairs, sets, or centimeters cannot be added to estimate numbers of elephants.

[251] Note that there is a one-to-one ratio between trophy imports, body imports, and live imports and the number of elephants.

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, all purposes.

Global net imports of ivory (kg) from all sources and for all purposes were low (ranging between 52 and 7,105 kilograms between 2003 and 2007). However, due to the CITES one-off sale of ivory from Botswana, Namibia, South Africa and Zimbabwe to China and Japan, net imports of ivory included 59,474kg in 2008 and 107,824kg in 2009. *See* Figure 1.

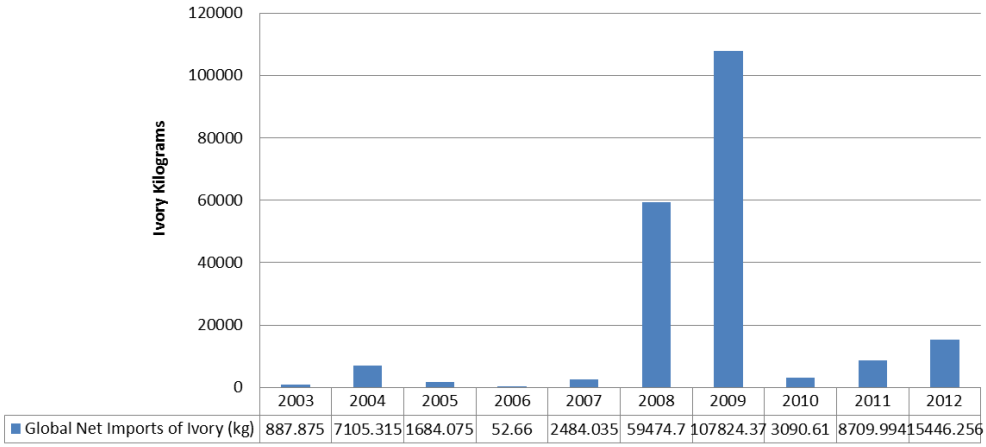


Figure 1: Global Net Imports of African Elephant Ivory (kg), All Sources and for All Purposes (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, all purposes. Search filtered for ivory carvings, pieces, and scraps, as well as tusks (kg).

U.S. imports: The analysis in this Petition estimates that between 2003 and 2012 the total of African elephants reflected by the reported U.S. net imports from all sources and for all purposes is 8,119. The calculations are detailed below.

In terms of measurable units, net elephant product imports during the 2003-2012 year span included 11,538kilograms (kg) (11.5 metric tons) of ivory (calculation: 127.6 kg ivory carvings + 476.8 kg ivory pieces + 3 kg ivory scraps + 10,930.8kg tusks =11,538kg).[252] Using an average tusk weight of 6.66 kg per tusk, this represents 1,732 African elephants (calculation: 11,538 kg ÷ 6.66 kg = 1,732 estimated elephants).

When this number of elephants is combined with imports without a measurable unit, including the number of net trophy imports (4,091), body imports (2), and live imports (74) between the years 2003-2012, the total number of African elephants in international trade in that time span is 40,266.[253] (Calculation: 1,732 + 4,091 +2 + 74 = 5,899 estimated elephants). Moreover, U.S. net imports of 4,440 tusks were reported between 2003 and 2012 without any unit indicated. However,

[252] This figure was derived by adding up the weight figures (in kg) for three types of specimens including ivory carvings, ivory pieces, ivory scraps, and tusks, as reported in the UNEP-WCMC CITES Trade Database when searching for "net imports" all sources, and all purposes. Other measurable units such as pairs, sets, or centimeters cannot be added to estimate numbers of elephants.

[253] Note that there is a one-to-one ratio between trophy imports, body imports, and live imports and the number of elephants.

one can still estimate the number of elephants potentially impacted by the imports. Elephants have two tusks and therefore two tusks are equal to one elephant. If one divides 18,471 tusks by two tusks per elephant that amounts to an estimated 2,220 elephants. Combing the total 5,899 elephants calculated above, brings the total of African elephants reflected by the reported international trade between 2003 and 2012 to 8,119 (calculation: 1,732 + 4,091 +2 + 74 + 2,220 = 8,119 estimated elephants). *See* Table 3.

Table 3: U.S. Net Imports Estimated Numbers of Elephants, All Sources and All Purposes (2003-2012)

All Specimens	Ivory kg	Tusk specimens	Trophies	Bodies	Live	Total Elephants
121,296 (no unit)	11,538 kg ÷ 6.66 kg (avg. weight per tusk) = 1,732 elephants	4,440 (no unit) ÷ 2 (number of tusks per elephant) = 2,220 elephants	4,091 trophies = 4,091 elephants	2 bodies = 2 elephants	74 live = 74 elephants	8,119

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, all purposes. Search filtered for US.

U.S. net imports of ivory (kg) from all sources and for all purposes were extremely low (ranging between 2 and 83 kilograms between 2003 and 2007). However, the imports increased following 2008, with the highest number of net imports of ivory from all sources and for all purposes rising to 6,028 kilograms in 2012. *See* Figure 2.

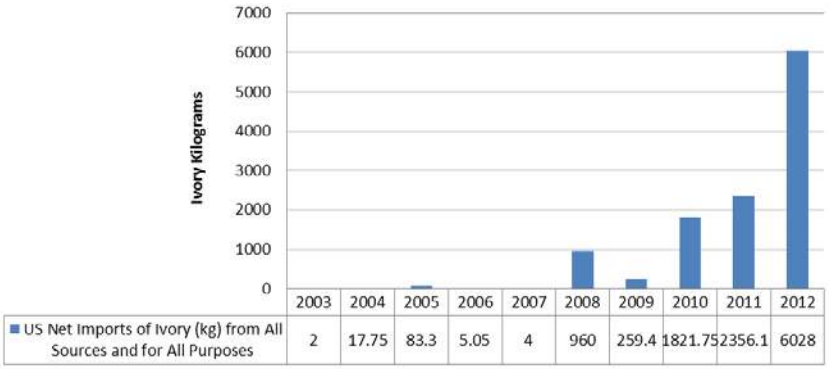


Figure 2: U.S. Net Imports of Ivory (kg) from All Sources and for All Purposes (2003-2012)

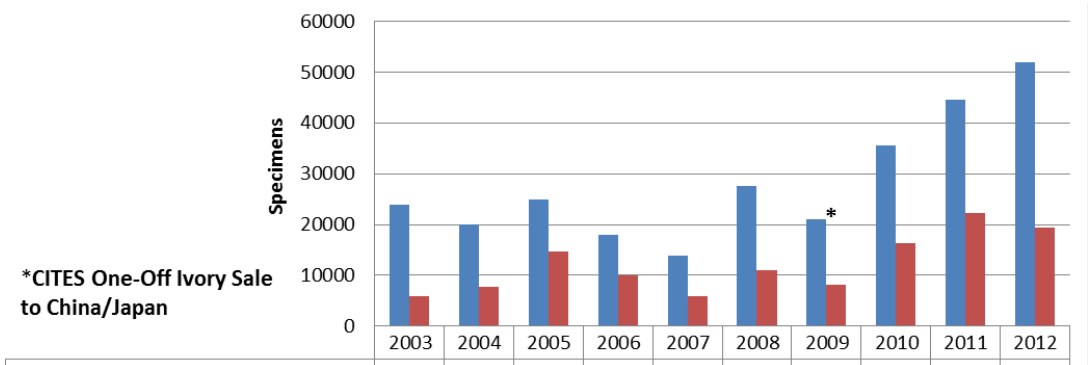
Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, all purposes. Search filtered for ivory carvings, pieces, and scraps, as well as tusks (kg).

2. African elephant specimens in trade (all sources and all purposes)

Global imports. In addition to looking at the weight of ivory in trade, and the number of tusks, to determine the impact of international trade on the African elephant, we can also examine the number of specimens in trade (without a measurable unit). Net imports from all sources and for all purposes between 2003 and 2012 consisted of 281,428 African elephant specimens (e.g., bodies, bones, carvings, ears, feet, genitalia, hair, ivory carvings, ivory pieces, ivory scraps, leather

products, shoes, skins, derivatives, tusks, among others).

Over the decade studied, based on numbers of specimens in trade, reported international ivory trade decreased from 2003, reaching a low in 2007, after which it increased (see Figure 3 below). In 2008 CITES approved a second[254] "one-off" sale of ivory from Botswana, Namibia, Zimbabwe and South Africa to China and Japan.[255] The first sale occurred in 1999 from Botswana, Namibia, and Zimbabwe to Japan.[256] Since 2009, net imports of African elephant specimens have grown substantially. *See* Figure 3.



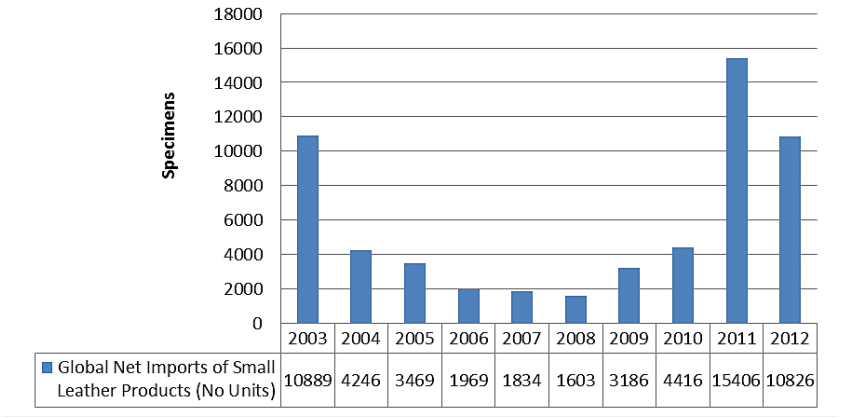
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global Net Imports of African Elephant Items from 2003-2012 (All Sources/All Purposes) (No Units)	23915	19964	24932	17939	13939	27575	21067	35615.5	44583	51901.5
US Net Imports of African Elephant Items from 2003-2012 (All Sources/All Purposes) (No Units)	5894	7836	14740	10003	5800	11062	8047	16398	22161	19354.5

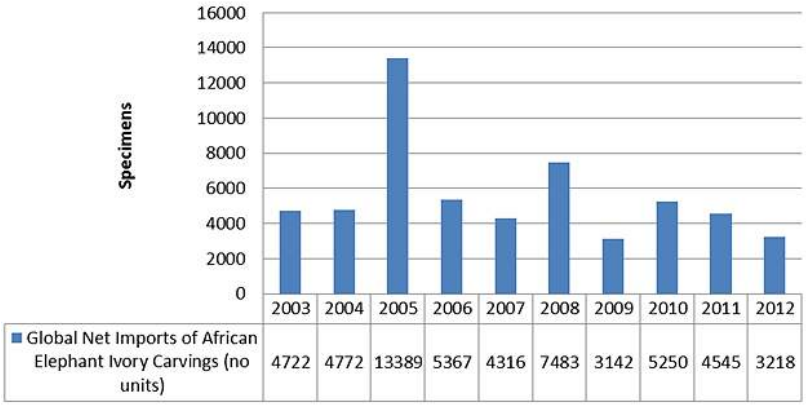
Figure 3: Global and U.S. Net Imports of African Elephant Specimens from All Sources and for All Purposes (2003-2012) (No Units)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, and all purposes. Filtered for "blank" terms and totals were calculated globally and for the US.

The top three items in terms of numbers of global net imports of specimens from all sources between 2003 and 2012 are as follows: small leather products (57,844 specimens), ivory carvings (56,204 specimens), and skins (33,184 specimens). Trade in African elephant skins is discussed in greater detail in a later section of this analysis. With respect to trends, global imports of small leather product specimens from all sources reached the lowest points in the decade studied in 2008 and have been on the increase since that point, with a sharp jump in 2011. Global ivory carving specimen imports have been on a general decline since 2005. Finally, global skin imports are generally increasing with the highest number of imports in 2009. *See* Figure 4.

[254] The first "one-off" sale occurred in 1999 from Botswana, Namibia, and Zimbabwe to Japan.
[255] CITES, *Ivory Auctions Raise 15 Million U.S.D.*
[256] CITES, *Illegal ivory trade.*





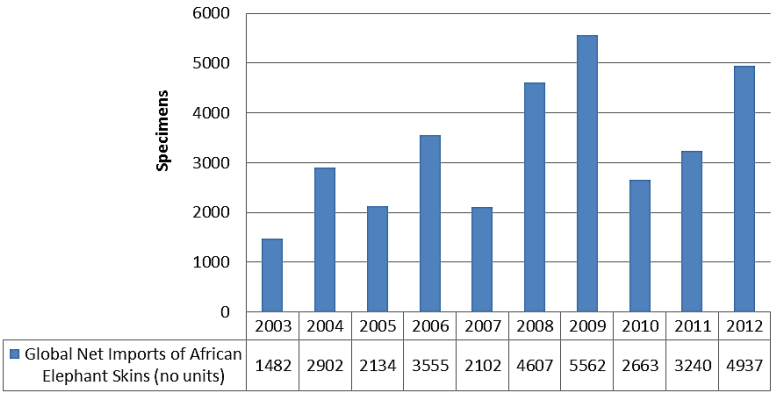


Figure 4: Global Net Imports of Small Leather Products, Ivory Carvings, and Skins, All Sources and All Purposes (No Units) (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, all purposes. Search filtered for top three specimens imported, which included small leather products, ivory carvings, and skins.

U.S. imports: As Figure 4 above illustrates, there is a clear upward trend in global net imports of African elephant specimens, as measured by number of specimens, and the U.S. is a large share of these imports over the period studied. The percentage of net imports globally comprised of U.S. imports varied from 24.6% to 55.8% over the period studied. However, it must be noted that data on specimens (without units) gives no indication as to the actual size, weight, or other dimensions

of the elephant products. The visible growth is in the net imports of number of specimens only. *See* Table 4.

Table 4: Global and U.S. Net Imports of African Elephant Specimens, All Sources and All Purposes (No Units) (2003-2012)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global Net Imports (number of specimens)	23,915	19,964	24,932	17,939	13,939	27,575	21,067	35,614	44,582	51,902
U.S. Net Imports (number of specimens)	5,894	7,836	14,740	10,003	5,800	11,062	8,047	16,398	22,161	19,355
U.S. Share of Total	**24.60%**	**39.20%**	**59.10%**	**55.80%**	**41.60%**	**40.10%**	**38.10%**	**46%**	**49.70%**	**37.30%**

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, and all purposes. Filtered for "blank" terms and totals were calculated globally and for the US.

U.S. imports of non-measurable specimens of African elephants and their products over the period studied far exceed those of other countries (approximate 44% of global total). Other major importers of African elephant specimens over the 2003 to 2012 year span (according to non-measurable units or "specimens") are China (approximately 8% of all net imports of specimens), Japan, (approximately 9%), Italy (approximately 4%), and Monaco (approximately 4%), among others. U.S. net imports between 2003 and 2012 correlated to 8,119 elephants.[257]

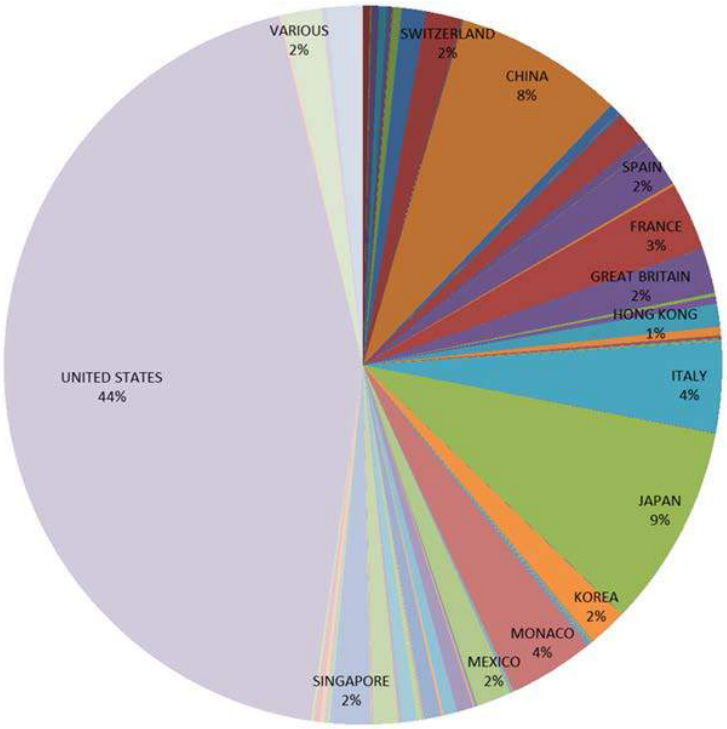
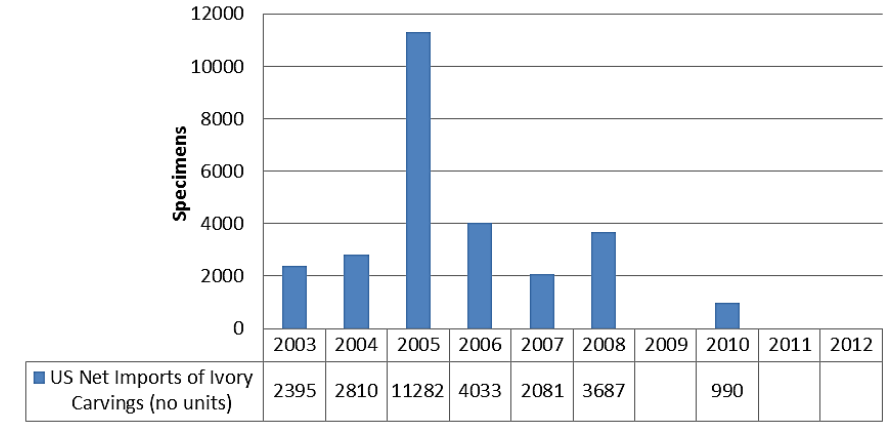
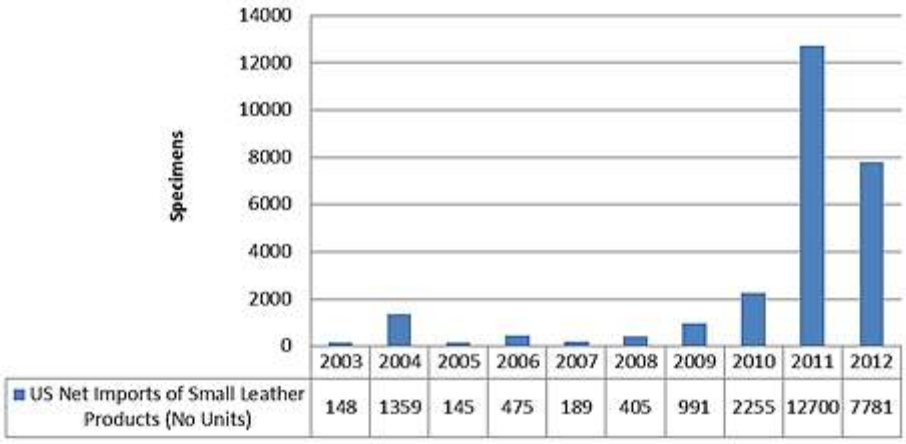


Figure 5: Global Net Imports by Top Countries, All Sources and All Purposes (No Units) (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, and all purposes. Totals were calculated globally. Only the top importing countries are listed.

The top three items in terms of numbers of U.S. net imports of specimens between 2003 and 2012 (all sources and all purposes) are as follows: ivory carvings (27,776 specimens), small leather products (26,448 specimens), and skins (15,131 specimens). Between 2009 and 2012, there were only 1,238 ivory carving specimen net imports into the United States. U.S. imports of small leather products increased substantially between 2010 and 2012, with a major spike in 2011. Finally, skin imports into the U.S. have had a general upward trend since 2003, with the biggest spike in 2008. *See* Figure 6 below.





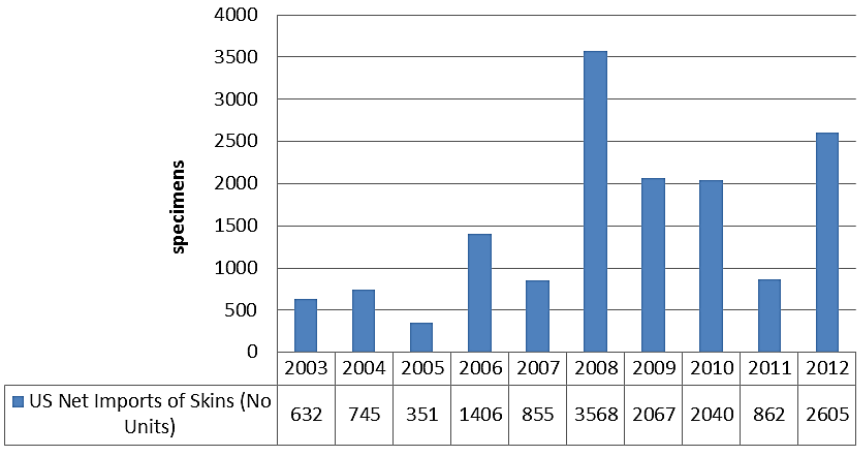


Figure 6: U.S. Net Imports of Ivory Carvings, Small Leather Products, and Skins, All Sources and All Purposes (No Units) (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, and all purposes. Filtered for "blank" terms and trends graphed for the top three specimen categories: ivory carvings, small leather products, and skins.

iii. Net Imports from Wild Sources and for All Purposes

1. Estimated elephants in trade (wild-sourced and for all purposes)

Global imports: The original analysis presented in this Petition estimates that between 2003 and 2012 the total of African elephants reflected by the reported international trade (global net imports from wild sources and for all purposes) is 46,283. The calculations are detailed below.

In terms of specimens that did have measurable units, net wild-sourced elephant product imports during that year span included approximately 193,520 kg[258] (193.5 metric tons) of ivory (calculation: 7,557.7kg ivory carvings + 40,366kg ivory pieces + 3kg ivory scraps + 145,593.6kg tusks = 193,520kg, equivalent to at least 29,057 African elephants.[259] When this number of elephants is combined with the number of net trophy imports (8,446), body imports (39), and live imports (321) sourced from the wild between the years 2003-2012, the total number of wild-sourced African elephants in international trade in that time span is 37,863.

If combined with the number of elephants represented by wild-sourced tusks imported from 2003-2012 without an indicated measurable unit such as kilograms, the total of wild-sourced African elephants in international trade between 2003 and 2012 is 46,283 (calculation: 29,057 + 8,420 + 8,446 + 8,446 + 39 + 321 = 46,283). *See* Table 5.

Table 5: Global Net Imports, Wild-Sourced and All Purposes (2003-2012)

All Specimens	Ivory kg	Tusk specimens	Trophies	Bodies	Live	Total Elephants
236,428	193,520kg ÷ 6.66kg (avg. weight per tusk) = 29,057 elephants	16,840 (no unit) ÷ 2 (number of tusks per elephant) = 8,420 elephants	8,446 trophies = 8,446 elephants	39 bodies = 39 elephants	321 live = 321 elephants	46,283

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and all purposes.

Global net imports of ivory (in kilograms) from wild sources and for all purposes include a substantial increase in 2008 and 2009 due to the CITES approved one-off sale of ivory from Botswana, Namibia, Zimbabwe and South Africa to China and Japan. *See* Figure 7.

[258] Calculated by adding the net import weights (in kilograms) of ivory carvings, ivory pieces, ivory scraps, and tusks between 2003 and 2012.

[259] The total weight of ivory specimens (carvings, pieces, scraps, and tusks) reported as being from a wild source and traded internationally for all purposes between 2003 and 2012 is 197,562 kg. Using the standard of the average weight of an elephants' two tusks as 6.66kg, the number of African elephants' represented by that total weight is 29,664.

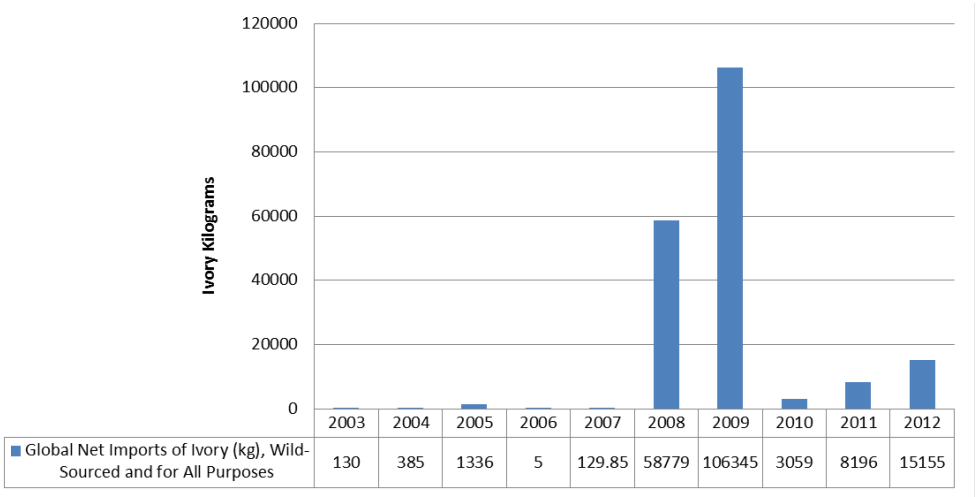


Figure 7: Global Net Imports of African Elephant Ivory (kg), Wild-Sourced and for All Purposes (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, and all purposes. Filtered for ivory carvings, pieces and scraps, as well as tusks (in kilograms).

U.S. imports: The analysis in this Petition estimates that between 2003 and 2012 the total of African elephants reflected by reported U.S. net imports from wild sources and for all purposes is 7,831. The calculations are detailed below.

The U.S. imported 10,933 kg[260] wild-sourced ivory between 2003 and 2012, equivalent to 1,641[261] African elephants (calculation: 10,933 kg ÷ 6.66kg avg. weight of two tusks = 1,641 elephants). When this number of elephants is combined with the number of net trophy imports (4,045, which equals 4,045 elephants), body imports (n/a), and live imports (70 elephants) sourced from the wild between the years 2003-2012, the total number of wild-sourced African elephants affected by imports into the U.S. is 5,756.

If combined with the number of elephants represented by wild-sourced tusks imported by the U.S. from 2003-2012 without an indicated measurable unit such as kilograms, the total number of U.S. imported wild-sourced elephants is 7,831 (calculation: 1,641 + 2,075 + 4,045 +70 = 7,831). *See* Table 6.

Table 6: U.S. Net Imports, Wild Sourced and for All Purposes (2003-2012)

All Specimens	Ivory kg	Tusk Specimens	Trophies	Bodies	Live	Total Elephants
110,213	10,933kg ÷ 6.66kg (avg. weight per	4,150 (no unit) ÷ 2 (number of tusks per elephant)	4,045 trophies = 4,045	n/a	70 live = 70 elephants	7,831

[260] Calculated by adding up the net import weight (in kilograms) of ivory carvings, ivory pieces, ivory scraps, and tusks sourced from the wild between 2003 and 2012.

[261] The total weight of ivory specimens (carvings, pieces, scraps, and tusks) reported as being from a wild sources and imported by the United States between 2003 and 2012 is equal to 10,933 kg. Using the standard of the average weight of an elephants' two tusks as 6.66kg, 1,641 is the number of African elephants' represented by that weight.

	tusk) = 1,641 elephants	= 2,075 elephants	elephants			

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild-sourced, and all purposes. Filtered for U.S. imports.

U.S. net imports of ivory (in kilograms) from wild sources and for all purposes were extremely low (ranging between 2 and 13 kilograms between 2003 and 2007). However, following 2008 there was a substantial increase in U.S. net imports of ivory (kg), jumping to 6,018kg in 2012. *See* Figure 8.

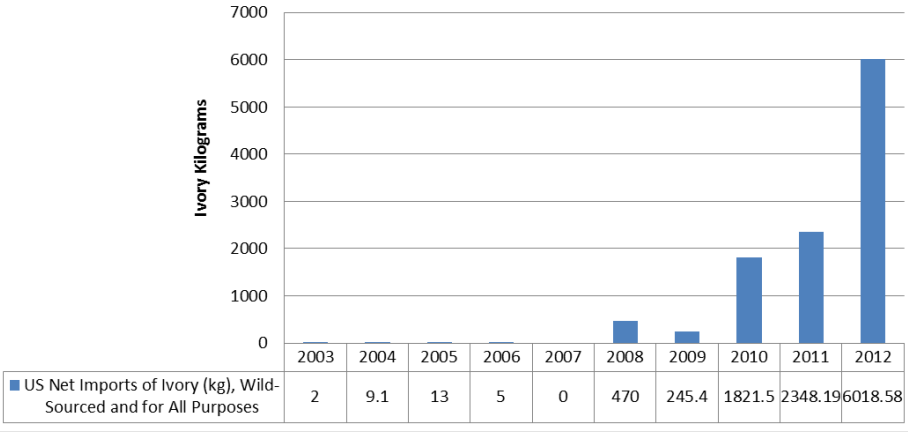
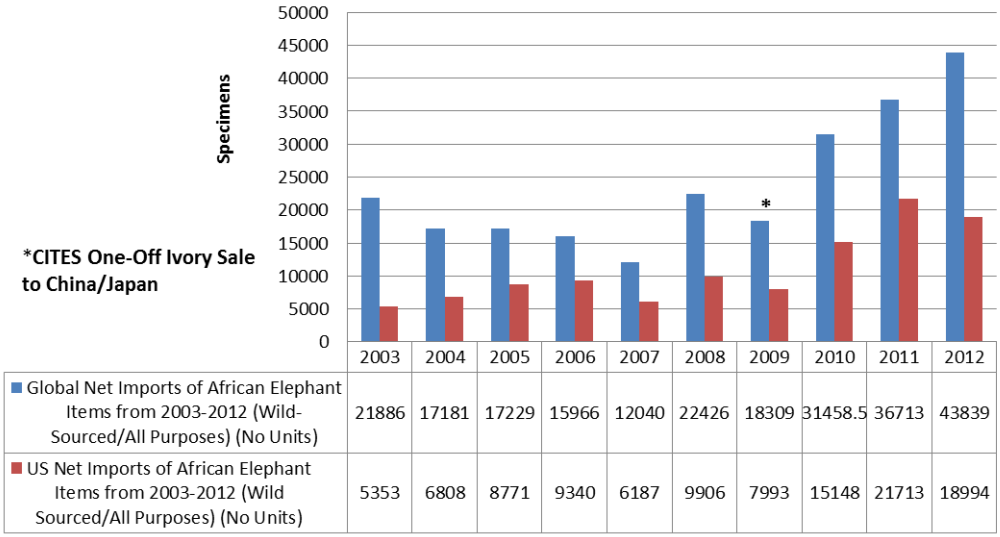


Figure 8: U.S. Net Imports of African Elephant Ivory (kg), Wild-Sourced and for All Purposes (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild-sourced, and all purposes. Filtered for U.S. imports and measurable units: ivory carvings, pieces and scraps, as well as tusks (kilograms).

2. African elephant specimens in trade (wild-sourced and for all purposes)

Global imports: Of total global net imports traded between 2003 and 2012 for all purposes (with no measurable units recorded), 236,428 African elephant specimens were sourced from the wild (equivalent to 84% of the net imports from all sources and for all purposes, without a measurable unit). Looking at the number of specimens in trade, it can be seen that following the 2009 second "one-off" sale of ivory from Botswana, Namibia, South Africa and Zimbabwe to China and Japan, net imports of wild-sourced African elephant specimens grew substantially, both in terms of measurable and non-measurable units. Of these global wild-sourced net imports (without a measurable unit) between 2003 and 2012, the U.S. has imported the largest share. *See* Figure 9.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global Net Imports of African Elephant Items from 2003-2012 (Wild-Sourced/All Purposes) (No Units)	21886	17181	17229	15966	12040	22426	18309	31458.5	36713	43839
US Net Imports of African Elephant Items from 2003-2012 (Wild Sourced/All Purposes) (No Units)	5353	6808	8771	9340	6187	9906	7993	15148	21713	18994

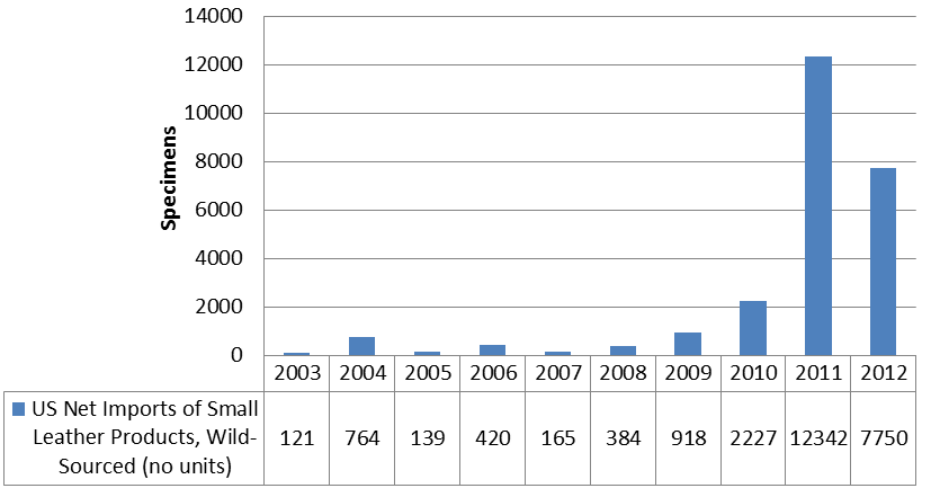
Figure 9: Global and U.S. Net Imports of African Elephant Specimens, Wild-Sourced and for All Purposes (No Units) (2003-2012)

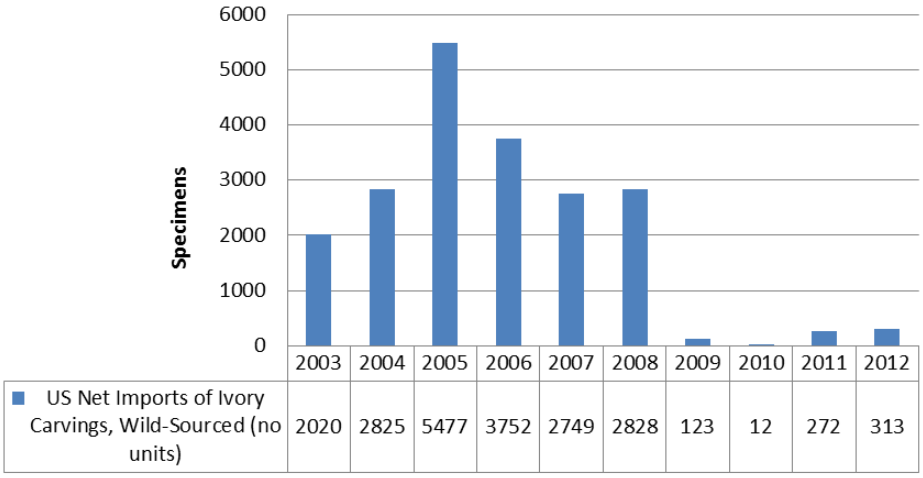
Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and all purposes. Totals were calculated globally and for the US.

The top three items in terms of numbers of global net imports of specimens between 2003 and 2012 are as follows: small leather products (56,766 specimens), ivory carvings (31,503 specimens), and skins (32,812 specimens). The trend pattern for global imports of these wild-sourced specimens follows closely that of specimens from all sources. Please see Figure 3 above.

U.S. imports: As Figure 9 above illustrates there is also a clear upward trend of global net imports of African elephant specimens from wild sources (as in the case of the imports from all sources) for the years 2003 to 2012. Of this trade, the U.S. imported 110,213 African elephant specimens between 2003 and 2012 (without a measurable unit recorded).

The top three items in terms of numbers of U.S. net imports of wild-sourced specimens between 2003 and 2012 are as follows: small leather products (25,230 specimens), ivory carvings (20,371 specimens), and skins (14,877 specimens). U.S. net imports of wild-sourced small leather specimens ranged between 121 and 918 specimens between 2003 and 2009, however they dramatically increased to 12,342 specimens in 2011 and 7,750 in 2012. U.S. net imports of wild-sourced ivory carving specimens have been declined from a high of 5,477 in 2005 to 313 in 2012. Finally, U.S. net imports of wild-sourced skin specimens reached a high of 3,568 in 2008, declined to 861 in 2011 and up to 2,593 in 2012. *See* Figure 10 below.





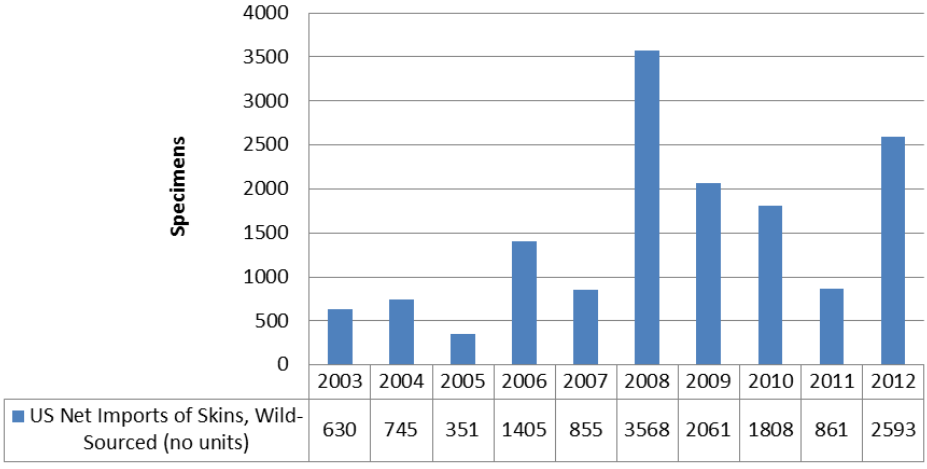


Figure 10: U.S. Net Imports of Small Leather Products, Ivory Carvings, and Skins, Wild Sourced and for All Purposes (No Units) (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild-sourced, and all purposes. Filtered for U.S. imports and the top three import terms: small leather products, ivory carvings, and skins.

iv. Top Three Purposes of International Trade in African Elephants

Based on the number of African elephants reflected by 2003-2012 net imports of ivory from all sources, tusks, trophies, bodies, and live animals in trade, the top three purposes of net imports of African elephants and their parts are: commercial, hunting trophy, and personal. Commercial net imports are represented by 29,674 elephants over ten years or approximately 60% of total estimated elephants impacted by trade from all sources and for all purposes between 2003 and 2012. Hunting trophy net imports are represented by 15,518 elephants over ten years or 31% of estimated elephants. Finally, personal net imports are represented by 3,105 elephants over ten years or 6% of estimated elephants.[262]

In terms of non-measurable units in global trade of African elephants and their parts, the most common purposes of all net imports are: commercial, personal, and hunting trophy. Commercial net imports from all sources totaled 185,798 specimens (approximately 66% of the total specimens without a measurable unit). Personal net imports from all sources totaled 49,390 specimens (approximately 17.5% of the total specimens). Finally, hunting trophy net imports from all sources totaled 35,000 (approximately 12.4% of the total specimens).

The U.S. is one of the main importing countries of African elephant specimens for these three purposes. Based on the number of specimens traded, between 2003-2012, the U.S. imported 80,183 specimens for commercial purpose (43% of the total net imports for commercial purpose, no measurable unit), 16,408 specimens for hunting trophy purpose (46% of the total net imports for hunting trophy purpose, no measurable unit), and 22,164 specimens for personal purpose (45% of the total net imports for personal purpose, no measurable unit).

1. Commercial Purpose

a. Estimated elephants in trade (commercial purpose)

Global imports: The original analysis presented in this Petition estimates that between 2003 and 2012 the total of African elephants reflected by net commercial imports from all sources is 29,674 and reflected by net commercial imports from wild sources is 28,253. The calculations are detailed below.

In terms of measurable units, net commercial imports of ivory during that year span included approximately 168,944 kg (168.9 metric tons), equivalent to at least 25,367 African elephants. (Calculation: 168,944 kg ÷ 6.66kg avg. weight of two tusks = 25,367 elephants)[263] When this number of elephants is combined with the number of net commercial trophy imports (182), body imports (1), and live imports (175) between the years 2003-2012; the total number of African elephants imported for commercial purposes in that time span is 25,725. (Calculation: 25,367 + 182 + 1 + 175 = 25,725) (Table 7)

If combined with the number of elephants represented by all tusks imported for commercial

[262] The calculations used to obtain these numbers are discussed in detail in the sections that follow.
[263] The total weight of net commercial imports of ivory specimens (carvings, pieces, scraps, and tusks) for all purposes between 2003 and 2012 is 168,944kg. Using the standard of the average weight of an elephants' two tusks as 6.66kg, the number of African elephants' represented by that total weight is 25,367.

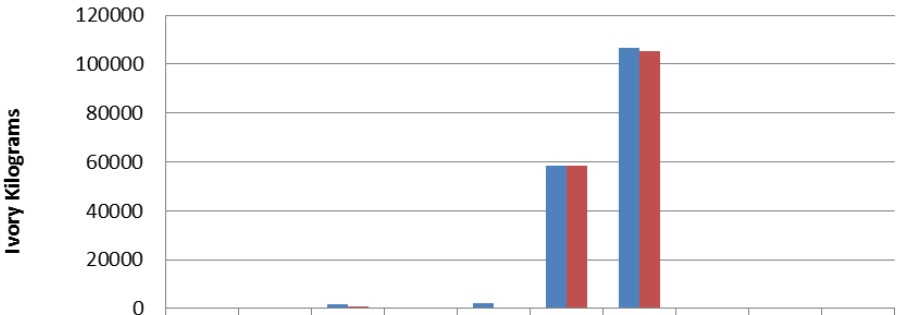
purpose from 2003-2012 without an indicated measurable unit such as kilograms, the total number of African elephants imported for commercial purpose is 29,674 (calculation: 25,725 + 3,949 + 182 + 1 + 175 = 29,674) (Table 7). Almost all of the net imports of African elephant specimens for commercial purposes were from wild-sourced elephants (28,253 elephants of 29,674, or 95.5%). *See* Table 7.

Table 7: Global Net Commercial Imports, Wild-Sourced (2003 to 2012)

Global Net Commercial Imports from 2003 to 2012 (all sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
185,829	168,944 kg ÷ 6.66kg (avg. weight per tusk) = 25,367 elephants	7,898 (no unit) ÷ 2 (number of tusks per elephant) = 3,949 elephants	182 trophies = 182 elephants	1 body = 1 elephant	175 live = 175 elephants	29,674
Global Net Commercial Imports from 2003 to 2012 (*wild* sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
161,819	164,441 kg ÷ 6.66kg (avg. weight per tusk) = 24,691 elephants	6,660 (no unit) ÷ 2 (number of tusks per elephant) = 3,330 elephants	174 trophies = 174 elephants	n/a	58 live = 58 elephants	28,253

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources and wild-sourced, commercial purpose.

Global net commercial imports of ivory (in kilograms) were only traded in significant numbers as part of the CITES approved on-off sale from Botswana, Namibia, Zimbabwe and South Africa to China and Japan, as can be seen in Figure 12 for the years 2008 and 2009.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global Net Commercial Imports of Ivory (kg), All Sources	57	106	1588	0.06	2024	58292	106566	29	470	208
Global Net Commercial Imports of Ivory (kg), Wild-Sourced	57	1	873	0	0	58272	105238	0	0	0

Figure 11: Global Net Commercial Imports of Ivory (kg), All Sources and Wild-Sourced (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild-sourced, and commercial purpose. Filtered for measurable units of ivory and tusks in kilograms.

U.S. imports: The analysis in this Petition estimates that between 2003 and 2012 the total of African elephants reflected by the reported U.S. net commercial imports from all sources is 206 and reflected by U.S. net commercial imports from wild sources is 173. The calculations are detailed below. However, please note that skins were also imported for commercial purpose into the U.S., and if looking at "skin" imports alone over the studied decade the U.S. imported 14,599 skins which are equivalent to 14,599 elephants (CITES defines skins as "substantially whole"). See discussion on skins below.

The U.S. imported 124 kg[264] of all-source ivory equivalent to 19[265] African elephants (calculation: 124kg ÷ 6.66kg = 19 elephants). When this number of elephants is combined with the number of U.S. net commercial trophy imports (29), body imports (1), and live imports (50) from all sources between the years 2003-2012; the total number of African elephants imported into U.S. for commercial purposes is 99 elephants (calculation: 19 + 29 + 1 + 50 = 99).

If combined with the number of elephants represented by all tusks the U.S. imported for commercial purpose from 2003-2012 without an indicated measurable unit such as kilograms, the total number of African elephants imported for commercial purpose is 206 (calculation: 19 + 107 + 29 + 1 +50 = 206 elephants). Of these imports, net U.S. imports for commercial purposes from wild-sourced elephants added up to 173 elephants (calculation: 2 + 95 + 26 + 50 = 173 elephants) of 206 or 89%. *See* Table 8.

Table 8: U.S. Net Commercial Imports, All Sources and Wild-Sourced (2003-2012)

U.S. Net Commercial Imports from 2003 to 2012 (all sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
80,168	124 kg ÷ 6.66kg (avg. weight per tusk) =19 elephants	214 (no unit) ÷ 2 (number of tusks per elephant) = 107 elephants	29 trophies = 29 elephants	1 body = 1 elephant	50 live = 50 elephants	206
U.S. Net Commercial Imports from 2003 to 2012 (wild-sourced)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
78,002	16 kg ÷ 6.66kg (avg. weight per tusk) = 2 elephants	189 (no unit) ÷ 2 (number of tusks per elephant) = 95 elephants	26 trophies = 26 elephants	n/a	50 live = 50 elephants	173

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources and wild sources, commercial purpose.

[264] Calculated by adding the U.S. net weight (in kilograms) of ivory carvings, ivory pieces, ivory scraps, and tusks imported for commercial purposes from all sources between 2003 and 2012.

[265] The total weight of ivory specimens (carvings, pieces, scraps, and tusks) imported by U.S. for commercial purposes between 2003 and 2012 is equal to 10,933 kg. Using the standard of the average weight of an elephants' two tusks as 6.66kg, 1,641 is the number of African elephants' represented by that weight.

U.S. net commercial imports of ivory (in kilograms) from all sources have ranged between 0.2kg in 2009 to the highest points of 83.3kg in 2005. U.S. net commercial imports of ivory (in kilograms) from wild sources have ranged between 1kg in 2004 and the highest point of 13kg in 2005. *See* Figure 12.

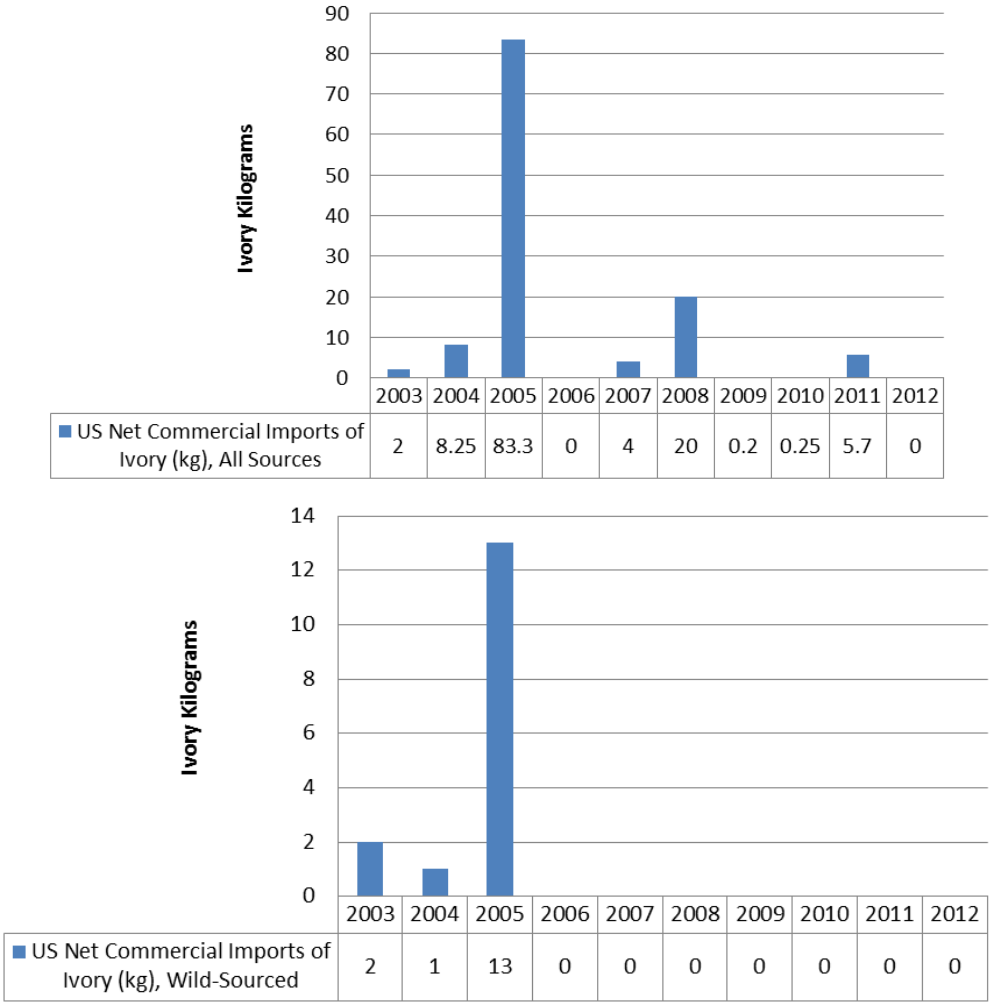


Figure 12: U.S. Net Commercial Imports of Ivory (kg) from All Sources and Wild-Sourced (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and commercial purpose. Totals were calculated for ivory items with a designated weight (ivory carvings, ivory pieces, ivory scraps, and tusks) globally and for US.

As Figure 12 shows U.S. imports of wild-sourced ivory for commercial purposes were extremely small over the period studied, and in fact were zero for the last seven of the ten years. Data on legal imports clearly does not reflect availability of ivory for sale in the United States. In fact, according to Stiles and Martin (2008), the U.S. is the second largest market for ivory.[266] The study

[266] D. Stiles & E. Martin, *The U.S.A's Ivory Markets—How Much a Threat to Elephants?*, 45 Pachyderm 67, 71 (July 2008–June 2009) [hereinafter "Stiles & Martin, *U.S.A.'s Ivory Markets*"].

recorded 24,004 ivory products in 657 outlets in sixteen U.S. cities.[267] The three cities with the largest number of products were New York City, San Francisco and Los Angeles with one-third of the items most likely post-1989 worked ivory,[268] meaning that it was most likely illegally imported or fraudulent in some way.

Commercial imports from range states: The top global gross[269] commercial wild-sourced imports between 2003 and 2012 were from the following African elephant range countries: South Africa (15,255 estimated elephants impacted by global gross commercial imports from South Africa), Botswana (9,553 estimated elephants impacted by global gross commercial imports from Botswana), Namibia (2,257 estimated elephants impacted by global gross commercial imports from Namibia), Zimbabwe (969 estimated elephants impacted by global gross commercial imports from Zimbabwe), among others. *See* Figure 13 and Table 10 below.

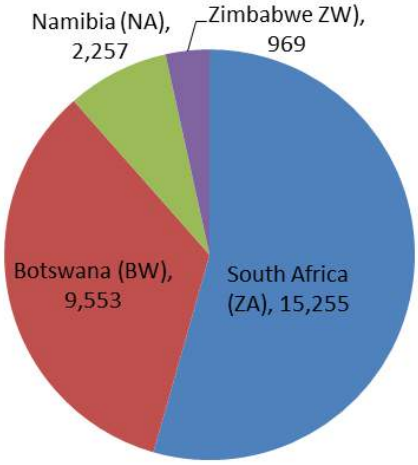


Figure 13: Total Estimated African Elephants Impacted by the Global Gross Wild-Sourced Commercial Imports of Elephants and their Parts from Range States, Top Countries (2003-2012)

Source: CITES Trade Database, "gross imports" search completed on 7 November, 2014, using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and commercial purpose. Search was conducted separately for all African elephant range states as exporters.

Table 10 offers a breakdown of the range countries imports from which represented the highest numbers of estimated African elephants impacted by wild-sourced commercial trade.

[267] Stiles & Martin, *U.S.A.'s Ivory Markets*..
[268] Stiles & Martin, *U.S.A.'s Ivory Markets*.
[269] In the CITES Trade Database, the user is prompted to select one of the following report types: gross exports, gross imports, net exports or net imports. In a gross trade output, the quantities reported by the exporter and importer are compared and the larger quantity is presented in the output. This type of output aims to give an estimate of the total number of items recorded in international trade (including exports and re-exports). When calculating imports and exports of specific countries, net data cannot be calculated because not all the necessary data is available. Only gross data is possible for specific countries. CITES Trade Database Guide.

Table 10: Global Gross Commercial Imports from South Africa, Namibia, Botswana, and Zimbabwe, Wild-Sourced (2003-2012)

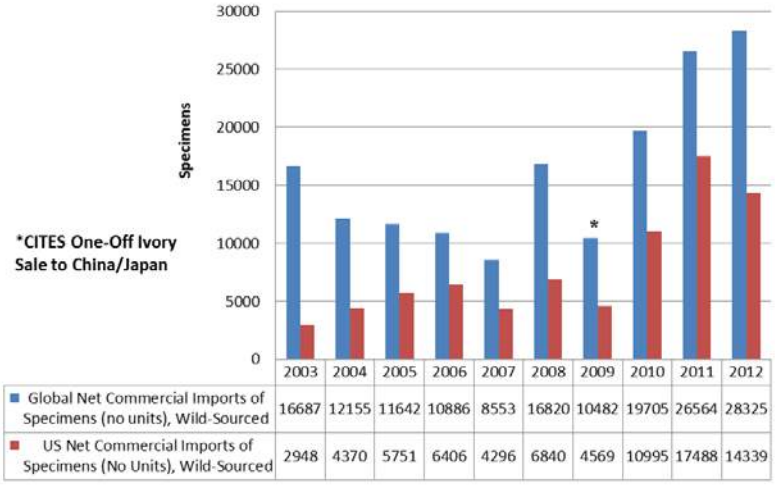
	Global Gross Imports of Wild-Sourced Elephant Parts for Commercial Purpose				
		South Africa	**Namibia**	**Botswana**	**Zimbabwe**
Global Gross Number of Imports	Ivory	101,536kg ÷ 6.66kg = 15,246 el.	15,005kg ÷ 6.66kg = 2,253 el.	43,170kg ÷ 6.66kg = 6,482 el.	3,823 ÷ 6.66kg = 574 el.
	Tusks	16 ÷ 2 = 8 el.	6 ÷ 2 = 3 el.	6,134÷ 2 = 3,067 el.	457 ÷ 2 = 229 el.
	Trophies	1,609 el.	1 el.	4 el.	159 el.
	Bodies	0	N/A	N/A	N/A
	Live	0	N/A	N/A	7
	Total Elephants	**16,863 el.**	**2,257 el.**	**9,553 el.**	**969 el.**

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild-sourced, and commercial purpose. Exporting countries selected included: South Africa, Namibia, Botswana, and Zimbabwe.

b. African elephant specimens in trade (commercial purpose)

Global imports: Of total global net imports of African elephant specimens between 2003-2012 for all purposes and from all sources (with no measurable units recorded), 185,829 African elephant specimens were imported for commercial purpose (66% of the total net imports with no measurable unit).

Based on the number of specimens in international trade, as Figure 14 illustrates, both global and U.S. net wild-sourced commercial specimen imports (no units) have grown substantially between 2003 and 2012, with a spike in growth following the 2009 CITES one-off sale of ivory. Although the 173 elephants estimated impacted by U.S. wild-sourced commercial imports account for only 0.6% (173 of the 28,253 elephants estimated impacted by *global* wild-sourced commercial trade), the U.S. is also responsible for a large number of skin imports. However, it is not possible to estimate how many elephants are represented by the skin trade based on the CITES Trade Database.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global Net Commercial Imports of Specimens (no units), Wild-Sourced	16687	12155	11642	10886	8553	16820	10482	19705	26564	28325
US Net Commercial Imports of Specimens (No Units), Wild-Sourced	2948	4370	5751	6406	4296	6840	4569	10995	17488	14339

Figure 14: Global and U.S. Net Commercial Imports of African Elephant Specimens from Wild-Sources (No Units) (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and commercial purpose. Totals were calculated globally and for US.

The top three items in terms of the number of global wild-sourced net commercial imports of specimens between 2003 and 2012 are as follows: small leather products (52,092 specimens), skins (30,860 specimens), and hair (21,981 specimens). Wild-sourced commercial small leather specimen imports reached the lowest points in 2008 at 1,342 specimens, and continued to rise to the highest points of 14,251 specimens in 2011, followed by 9,115 in 2012. Wild-sourced commercial skin specimen imports steadily increased between 2003 and 2009, then fell to 2,215 and grew again through 2012. Wild-sourced commercial hair specimen imports ranged between zero and nine until 2010 when 6,977 specimens were imported, the number then slightly fell in 2011 and rose to the highest point of 10,035 specimens in 2012.

U.S. imports: The U.S. imported 80,168 African elephant commercial specimens from all sources between 2003 and 2012, which is 43% of the total global net imported commercial specimens from all sources (185,798). Of these imports, U.S. imported 78,002 African elephant commercial specimens from wild sources, which is 48% of the total global net imported commercial specimens from wild sources (161,819).

The top three items in terms of numbers of U.S. net imports of commercial wild-sourced specimens between 2003 and 2012 are as follows: small leather products (23,816 specimens), ivory carvings (16,196 specimens), and skins (14,371 specimens). Net U.S. imports of wild-sourced small leather specimens made a substantial jump from 1,819 in 2010 to 12,147 in 2011, and then 7,524 specimens in 2012. In terms of ivory carvings, following 2008 there have been zero wild-sourced ivory carving imports into the U.S. for commercial purpose. Net imports of wild-sourced commercial skins into the U.S. have ranged between a low of 352 specimens in 2005 and a high of 3,556 specimens in 2008. *See* Figure 15.

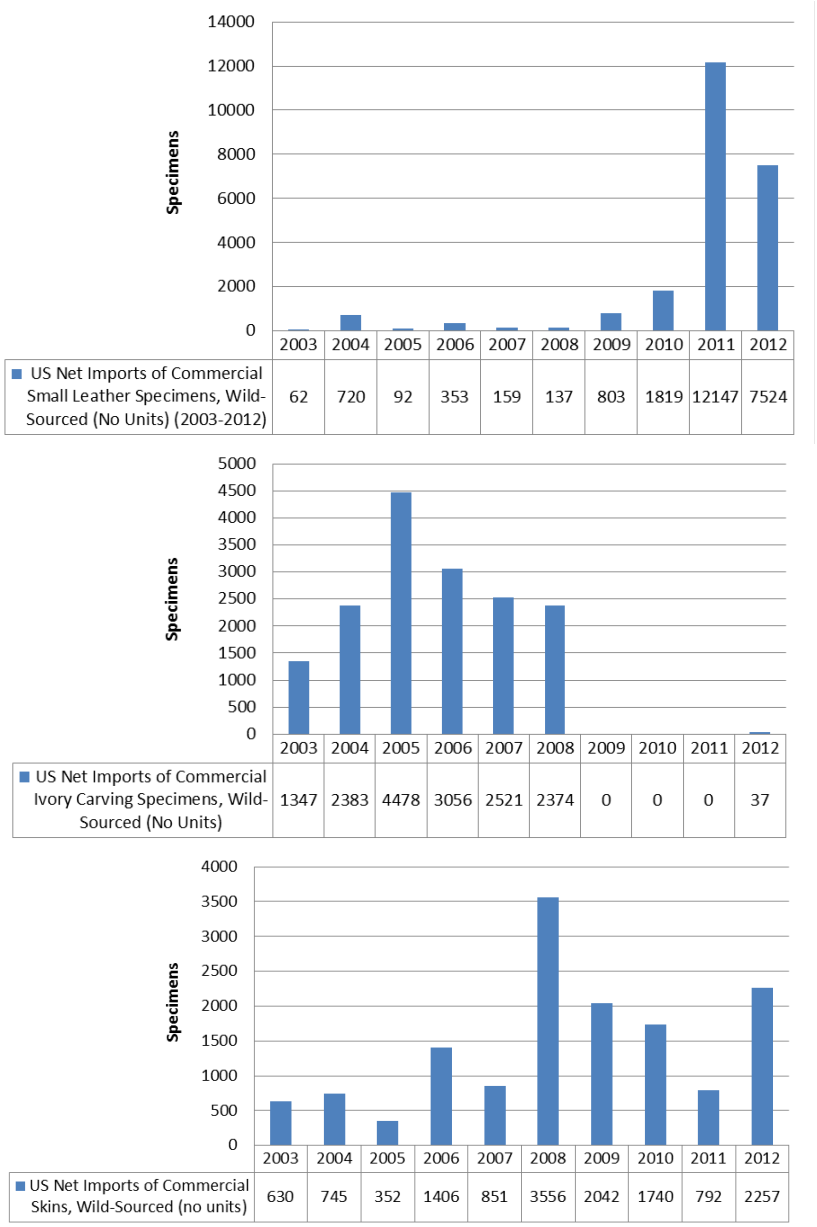


Figure 15: U.S. Net Imports of Commercial Leather Specimens, Ivory Carving Specimens, and Skins, Wild-Sourced (No Units) (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and commercial purpose. Filtered for U.S. and for "blank" terms and graphs created for the top imported specimens: small leather products, ivory carvings, and skins.

c. Global and U.S. imports of African elephant skins

In addition to ivory, another major category of global imports are African elephant skins, skin pieces, unidentified products made of skin leather (small and large), and other leather products such as shoes. According to the CITES Trade Database, global net imports included 31,226 skins between 2003 and 2012. CITES defines each "skin" as a "substantially whole skin" and this equates to 31,226 elephants supplying this number of skins. This impact on elephants of the skin trade does not include the additional elephants killed to supply the other skin-type of imports over

the decade: 17,949 skin pieces; 53,057 small leather products; 4,822 large leather products; and 77 shoes. Of this trade, the U.S. net imports included 14,599 skins, so nearly half of the 31,226 global imports. If each skin imported is a whole skin, this equates to 14,599 elephants supplying this number of skins. Again, this impact on elephants of the skin trade does not include the additional elephants killed to supply the other skin-type of imports to the U.S. over the decade: 12,595 skin pieces; 24, 894 small leather products; 593 large leather products; and 61 shoes. *See* Table 9.

The number of African elephant skins imported to the U.S. is increasing. The number of skins imported in the first five years of the decade studied totaled 3,985, an average of 797 per year; whereas, the number imported in the last five years totaled 10,614, an average of 2,123 per year. Therefore, there was a more than two-fold increase in African elephant skin imports to the U.S. between 2008 and 2012 as compared to the previous five-year period. *See* Table 9.

Table 9: Global and U.S. Net Commercial Imports, All Sources: Leather Products, Shoes, Skin Pieces, and Skins (2003-2012)

Global Net Commercial Imports (All Sources)											
Term	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**TOTAL ALL YEARS**
leather products (large)	332	2648	167	530	500	199	17	28	114	287	**4822**
leather products (small)	10819	4088	3374	1853	1740	1343	2492	3627	14604	9117	**53057**
shoes	16	48	1	2	0	26	0	0	0	0	**77**
skin pieces	1618	546	1322	1654	1421	1775	1390	2018	2484	3721	**17949**
skins	1441	2879	2130	3501	2096	4431	5416	2432	3138	3762	**31226**
U.S. Net Commercial Imports (All Sources)											
Term	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**TOTAL ALL YEARS**
leather products (large)	56	15	4	36	71	44	8	19	107	233	**593**
leather products (small)	73	1298	95	393	165	153	850	1839	12481	7547	**24894**
shoes	16	42	1	2							**61**
skin pieces	527	419	827	1500	512	434	622	1750	2455	3549	**12595**
skins	631	745	352	1406	851	3556	2042	1957	792	2267	**14599**

Source: CITES Trade Database, net imports search completed in September 29, 2014, using the following terms: Loxodonta africana, year range 2003-2012, all sources, and commercial purpose. Terms selected included all leather products (leather products, skins, skin pieces, skin scraps, sides, and shoes). Filtered for "blank" units.

Similarly, between 2003 and 2007, the average annual square meters of skin products imported is 452 square meters (calculation: (240+139+612+897+372)/5 = 452m^2). However, between 2008 and 2012 the average annual square meters of skin product imported is 723 square meters

(calculation: (742 + 1725 + 555 + 592 + 0)/5 = 723m^2). This represents an increase of approximately 60%. Therefore net U.S. skin imports in terms of measurable units have also increased substantially since 2008. *See* Table 10.

Table 10:Global and U.S. Gross Commercial Imports, All Sources: Leather Products, Shoes, Skin Pieces, and Skins (meters squared) (2003-2012)

Global Net Commercial Imports (All Sources)												
Term	**Unit**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**TOTAL ALL YEARS**
leather products (large)	m2	0	0	0	0	0	625	03350	0644	0398	0	5017
leather products (small)	m2	0	0	0	0	0	0	0	02280	04576	0	6856
skin pieces	m2	147	0	392	49	0	1435	1231	380	303	15	3953
skins	m2	6200	2075	9012	3270	5158	4666	4062	1001	848	0	36293
TOTAL M^2	**m2**	**6347**	**2075**	**9404**	**3319**	**5158**	**6726**	**8643**	**4305**	**6125**	**15**	**52119**
U.S. Net Commercial Imports (All Sources)												
Term	**Unit**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**TOTAL ALL YEARS**
leather products (large)	m2	0	0	0	0	0	0425	0868	0	0	0	1293
leather products (small)	m2	0	0	0	0	0	0	0	0380	0310	0	690
skin pieces	m2	86	0	157	0	0	047	704	175	282	0	1451
skins	m2	154	139	455	897	372	270	153	0	0	0	2440
TOTAL M^2	**m2**	**240**	**139**	**612**	**897**	**372**	**742**	**1725**	**555**	**592**	**0**	**5874**

Source: CITES Trade Database, net imports search completed in September 29, 2014, using the following terms: Loxodonta africana, year range 2003-2012, all sources, and commercial purpose. Terms selected included all leather products (leather products, skins, skin pieces, skin scraps, sides, and shoes). Filtered for measurable units.

Zimbabwe and South Africa are the primary countries of origin of skins and skin products imported to the U.S. for commercial purposes (*see* Tables 11 and 12).

Table 11: U.S. Gross[270] Commercial Imports from 2003 to 2012 of Wild-Sourced Skin Products (no units)

Country of Export	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global	1219	1963	1194	3311	1581	4203	3631	5341	15365	20809
Zimbabwe	1087	963	727	2506	1251	3598	2864	3459	3058	5457
South Africa	98	937	461	660	319	574	81	397	165	302

Source: CITES Trade Database, search completed in January 16, 2015 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and commercial purpose. Terms selected included all leather products (skins, skin pieces, skin scraps, sides, and shoes). The United States was selected as the importing country. Search conducted separately for "All Countries", "Zimbabwe", and "South Africa." Filtered for "blank" units.

Note that for 2011 and 2012, it appears as though Zimbabwe and South Africa were not the primary suppliers of skin products to the United States. However, according to the CITES database although other countries served as exporters, Zimbabwe and South Africa were the countries of origin for all of the skins.

Table 12: U.S. Gross Commercial Imports, Wild-Sourced Skin Products (meters squared) (2003-2012)

Term	Units	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global	m2	240.3	139.0	612.2	896.8	371.8	740.0	1724.9	554.9	591.6	0
Zimbabwe	m2	61.0	0.0	0.0	130.0	0.0	0.0	0.0	0.0	0.0	0
South Africa	m2	179.3	139.0	612.2	766.8	371.8	740.0	1724.9	554.9	591.6	0

Source: CITES Trade Database, search completed in January 16, 2015 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and commercial purpose. Terms selected included all leather products (skins, skin pieces, skin scraps, sides, and shoes). The United States was selected as the importing country. Search conducted separately for "All Countries", "Zimbabwe", and "South Africa." Filtered for measurable units, pairs of shoes excluded.

According to data obtained from the U.S. Law Enforcement Management Information System (LEMIS), the following are some of the major U.S. importers of African elephant skins over the last five years:

- Kelly Larson Sales: http://www.kellylarsonsales.com/
- Mundo Exotico, Inc.: http://www.mundoexotico.com/
- African Game Industries: https://www.africangame.com/
- Rod Patrick: http://www.rodpatrickboots.com/
- American Western Trading Co.: [website not found]
- Tshabezi Safaris: http://www.tshabezi.com/
- Farhi International LLC: http://thefarhicollection.com/home.htm

The CITES Trade Database does not provide information on the exact source of the elephant product (i.e. natural death, culling, hunts, etc.) nor the year in which the elephant died. Elephant

[270] As explained in the methodology section of this analysis, when using the CITES database to determine imports into specified countries, only gross imports may be calculated (not net imports) because not all of the data necessary for the calculation is available.

skins possibly come from elephants that were culled and may be from recent culls or culls that occurred years ago and the skins were stockpiled. The USFWS has stated that culling is the "corner stone of Zimbabwe elephant management practices."[271] South Africa stopped culling elephants in 1995.[272] However, before then, the government of South Africa culled hundreds of elephants annually in Kruger National Park, and possesses large stockpiles of skins. Any U.S. imports of African elephant skin products sourced from South Africa are likely to come from these stockpiles.

It is clear that the U.S. is a substantial market for elephant skin and skin products.

2. Hunting Trophy Purpose

a. Estimated elephants in trade (hunting trophy purpose)

Global imports: The original analysis presented in this Petition estimates that between 2003 and 2012 the total of African elephants reflected by the reported global hunting trophy net imports from all sources is 15,518. The calculations are detailed below.

In terms of measurable units, net hunting trophy imports of ivory during that ten-year span included approximately 20,800 kg (20.8 metric tons), equivalent to at least 3,123 African elephants (calculation: 20,800kg ÷ 6.66kg = 3,123 elephants).[273] When this number of elephants is combined with the number of net trophy imports (7,687) and body imports (14) between the years 2003-2012, the total number of African elephants imported as hunting trophies in that ten-year time span is 10,824 (calculation: 3,123 + 7,687 + 14 = 10,824).

If combined with the number of elephants represented by all tusks imported for hunting purposes from 2003-2012 without an indicated measurable unit such as kilograms, the total number of African elephants imported for hunting trophy purposes is 15,518 (calculation: 3,123 + 4,694 + 7,687 +14 = 15,518). Almost all of net imports of African elephant specimens as hunting trophies are from wild-sourced elephants (15,439 elephants of 15,518 or 99.5%). *See* Table 13.

[271] USFWS, *Enhancement Finding for African Elephants Taken as Sport-hunted Trophies in Zimbabwe during 2014* (Jul. 22, 2014), available at http://www.fws.gov/international/pdf/enhancement-finding-July-2014-elephant-Zimbabwe.PDF.

[272] K. Lange, Desperate Measure: In Overcrowded Parks, Managers May Have to Resort to Shooting Elephants to Save Ecosystems, Nat'l Geographic, http://ngm.nationalgeographic.com/2008/09/elephant-management/lange-text (last visited Jan. 17, 2015).

[273] The total weight of net hunting trophy imports of ivory specimens (carvings, pieces, scraps, and tusks) for all purposes between 2003 and 2012 is 20,800kg. Using the standard of the average weight of an elephants' two tusks as 6.66kg, the number of African elephants' represented by that total weight is 3,123.

Table 13: Global Net Hunting Trophy Imports, All Sources and Wild-Sourced (2003-2012)

Global Net Hunting Trophy Imports from 2003 to 2012 (all sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
35,000	20,800 kg ÷ 6.66kg (avg. weight per tusk) = 3,123 elephants	9,388 (no unit) ÷ 2 (number of tusks per elephant) = 4,694 elephants	7,687 trophies = 7,687 elephants	14 bodies = 14 elephant	n/a	15,518
Global Net Hunting Trophy Imports from 2003 to 2012 (*wild* sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
34,806	20,783 kg ÷ 6.66kg (avg. weight per tusk) = 3,121 elephants	9,350 (no unit) ÷ 2 (number of tusks per elephant) = 4,675 elephants	7,629 trophies = 7,629 elephants	14 bodies = 14 elephant	n/a	15,439

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources and wild-sourced, and hunting trophy purpose.

As Figure 16 below illustrates following 2008 and the announcement of the CITES one-off sale that took place in 2009, there was a steady incline through 2012. The number of global net imports of ivory (in kilograms) dramatically increased from 21.5kg in 2008 to 11,868kg in 2012. Prior to 2008, there are almost no recorded hunting trophy ivory imports.

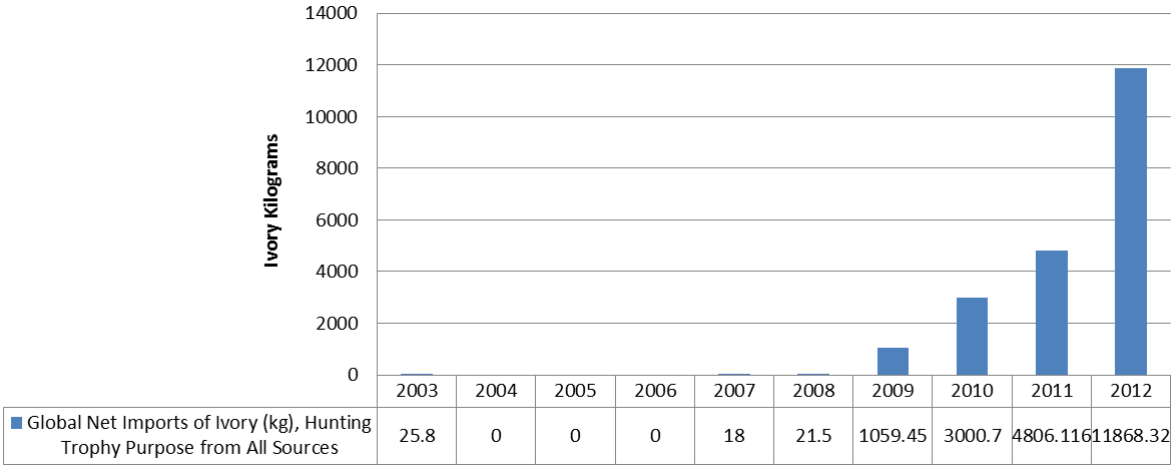


Figure 16: Global Net Imports of Ivory (kg), Hunting Trophy Purpose, All Sources (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources and wild-sourced, and hunting trophy purpose. Filtered for measurable units, specifically ivory carvings, pieces, and scraps, as well as tusks (in kilograms).

U.S. imports: The analysis in this Petition estimates that between 2003 and 2012 the total of African elephants reflected by the reported U.S. hunting trophy net imports from all sources is

7,500. The calculations are detailed below.

The U.S. imported (from all sources) 10,443 kg[274] of ivory equivalent to 1,568[275] African elephants (calculation: 10,443kg ÷ 6.66 kg = 1,568 elephants). When this number of elephants is combined with the number of U.S. net trophy imports (3,997) from all sources between the years 2003-2012, the total number of African elephants imported by U.S. as hunting trophies is 5,568 (calculation: 1,568 + 3,997 = 5,565).

If combined with the number of elephants represented by all tusks imported by the U.S. for hunting purposes from 2003-2012 without an indicated measurable unit such as kilograms, the total number of African elephants imported by the U.S. for hunting trophy purposes is 7,500 (calculation: 1,568 + 1,935 + 3,997 = 7,500 elephants). Of these imports, almost all of the net U.S. imports for hunting trophy purposes were from wild-sourced elephants (7,461 elephants of 7,500 or 99.5%). *See* Table 14.

Table 14: U.S. Net Hunting Trophy Imports, All Sources and Wild-Sourced (2003-2012)

U.S. Net Hunting Trophy Imports from 2003 to 2012 (all sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
16,408	10,443 kg ÷ 6.66kg (avg. weight per tusk) = 1,568 elephants	3,869 (no unit) ÷ 2 (number of tusks per elephant) = 1,935 elephants	3,997 trophies = 3,997 elephants	n/a	n/a	7,500
U.S. Net Hunting Trophy Imports from 2003 to 2012 (*wild* sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
16,243	10,429 kg ÷ 6.66kg (avg. weight per tusk) = 1,580 elephants	3,850 (no unit) ÷ 2 (number of tusks per elephant) = 1,925 elephants	3,956 trophies = 3,956 elephants	n/a	n/a	7,461

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources and wild-sourced, and hunting trophy purpose. Filtered for US.

As Figure 17 illustrates, U.S. net imports of hunting trophy ivory (in kilograms) from all sources were zero prior between 2003 and 2008. However, starting in 2009 when CITES permitted a one-off sale of ivory to China and Japan, there has been a steady incline of hunting trophy ivory imports. The U.S. net imports of hunting trophy ivory (in kilograms) from all sources went from zero kg in 2008 to 6,015kg in 2012. These U.S. imports in 2012 represent almost half of the global net imports of hunting trophy ivory in 2012 (11,868kg).

[274] Calculated by adding up the U.S. net import weight (in kilograms) of ivory carvings, ivory pieces, ivory scraps, and tusks imported for hunting trophy purposes from all sources between 2003 and 2012.
[275] The total weight of ivory specimens (carvings, pieces, scraps, and tusks) imported by the U.S. as hunting trophies between 2003 and 2012 is equal to 10,443 kg. Using the standard of the average weight of an elephants' two tusks as 6.66kg, the number of African elephants' represented by that total weight is 1,582.

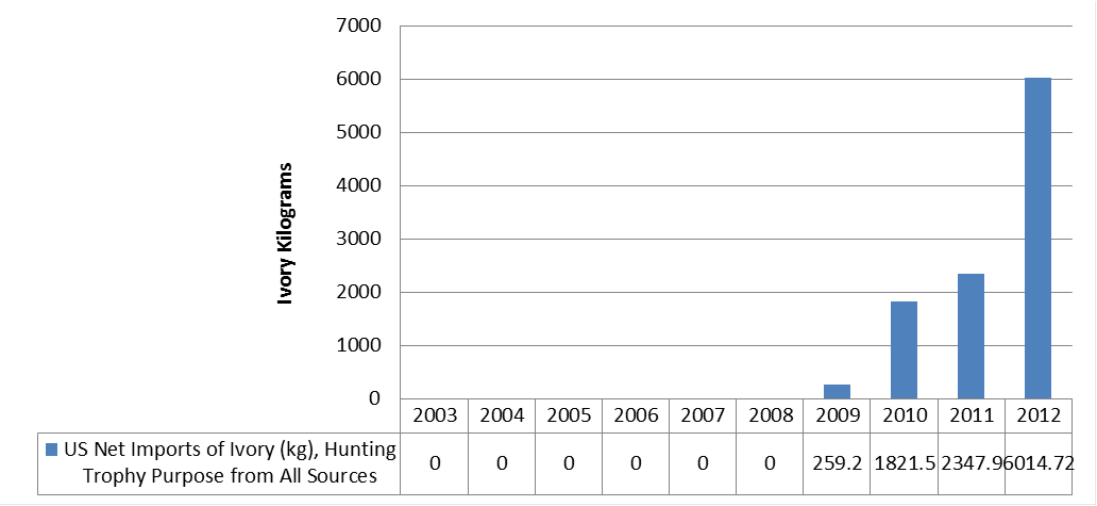


Figure 17: U.S. Net Imports of Ivory (kg), Hunting Trophy Purpose, All Sources (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, and hunting trophy purpose. Filtered for U.S. and measurable units, specifically ivory carvings, pieces, and scraps, as well as tusks (in kilograms).

Hunting trophy imports from range states: The top global gross hunting trophy imports between 2003 and 2012 were from the following African elephant range countries: Zimbabwe (7,238 estimated elephants), Botswana (3,284 estimated elephants), South Africa (1,892 estimated elephants), Namibia (876 estimated elephants), Mozambique (712 estimated elephants), Cameroon (612 estimated elephants), Tanzania (889 estimated elephants), and Zambia (129 estimated elephants). *See* Table 15 and Figure 18.

Table 15: Global Gross Imports of Wild-Sourced Elephant Parts for Hunting Trophy Purpose (2003-2012)

Global Gross Imports of Wild-Sourced Elephant Parts for Hunting Trophy Purpose (2003-2012)									
		Zimbabwe	**Botswana**	**South Africa**	**Tanzania**	**Namibia**	**Mozambique**	**Cameroon**	**Zambia**
Global Gross Number of Imports	Ivory	20,246kg ÷ 6.66 = 3,040 el.	200kg ÷ 6.66 = 30 el.	93kg ÷ 6.66 = 14 el.	N/A	N/A	206kg ÷ 6.66 = 31 el.	33kg ÷ 6.66 =5 el.	N/A
	Tusks	3,168 ÷ 2 = 1,584 el.	2,489 ÷ 2 = 1,245 el.	1816 ÷ 2 = 908 el.	973÷ 2 = 487	778 ÷ 2 = 389 el.	662 ÷ 2 = 331 el.	340 ÷ 2 = 170 el.	182 ÷ 2 = 91 el.
	Trophies	2,614 el.	2002 el.	966 el.	888 el.	487 el.	350 el.	435 el.	38 el.
	Bodies	N/A	7	4 el.	1	N/A	N/A	2 el.	N/A
	Live	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A
	Total Elephants	**7,238 el.**	**3,284 el.**	**1,892 el.**	**1,376 el.**	**876 el.**	**712 el.**	**612 el.**	**129 el.**

Source: CITES Trade Database, search completed in January 16, 2015 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and hunting trophy purpose. Exporting countries selected included: Zimbabwe, Botswana, South Africa, Tanzania, Namibia, Mozambique, Cameroon, and Zambia.

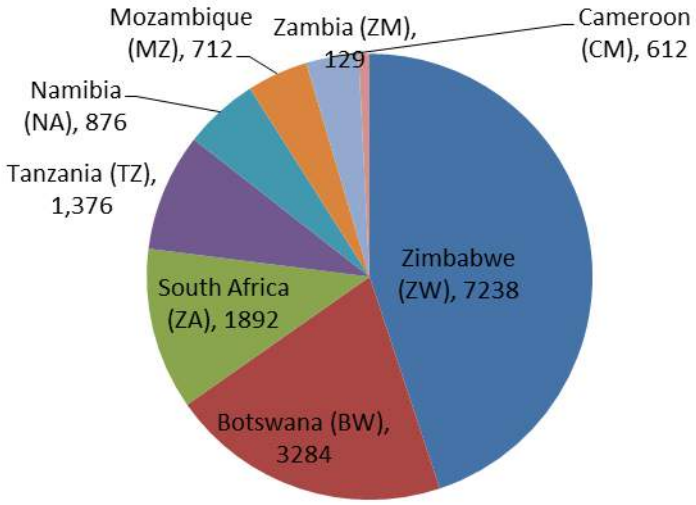


Figure 18: Total Estimate African Elephants Impacted by the Gross Wild-Sourced Hunting Trophy Imports of Elephants and their Parts from Range States, Top Countries (2003-2012)

Source: CITES Trade Database, "gross imports" search completed on 7 November, 2014, using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and hunting trophy purpose. Search was conducted separately for all African elephant range states as exporters.

In terms of the role the U.S. has in gross hunting trophy imports from African elephant range states, the highest number of elephants imported between 2003 and 2012 are as follows: Zimbabwe (3,711 estimated elephants), Botswana (1,487 estimated elephants), South Africa (1,286 estimated elephants), Tanzania (337 estimated elephants), Namibia (316 estimated elephants), among others. *See* Table 16 and Figure 19.

Table 16: U.S. Gross Imports of Elephant Parts for Hunting Trophy Purpose, Wild-Sourced (2003-2012)

U.S. Gross Imports of Wild-Sourced Elephant Parts for Hunting Trophy Purpose (2003-2012)						
		Zimbabwe	**Botswana**	**South Africa**	**Tanzania**	**Namibia**
U.S. Gross Number of Imports	Ivory	10,403kg ÷ 6.66 = 1,562 el.	N/A	N/A	N/A	N/A
	Tusks	1,211 ÷ 2 = 606 el.	1,003 ÷ 2 = 502 el.	853 ÷ 2 = 427 el.	N/A	266 ÷ 2 = 133 el.
	Trophies	1,543 el.	985 el.	859 el.	337 el.	183 el.
	Bodies	N/A	N/A	N/A	N/A	N/A
	Live	N/A	N/A	N/A	N/A	N/A
	Total Elephants	**3,711 el.**	**1,487 el.**	**1,286 el.**	**337 el.**	**316 el.**

Source: CITES Trade Database, search completed in January 16, 2015 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and hunting trophy purpose. Exporting countries selected included: Zimbabwe, Botswana, South Africa, Tanzania, and Namibia. Filtered for U.S. as importer.

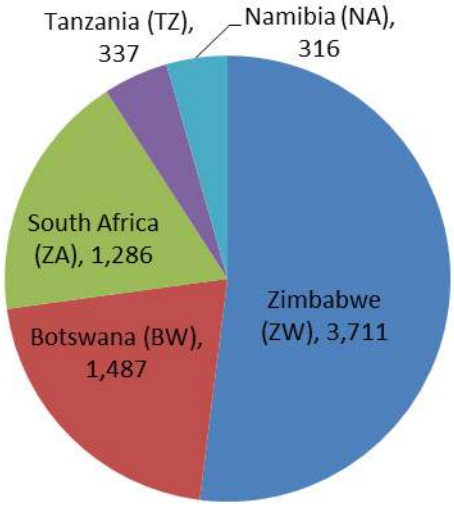


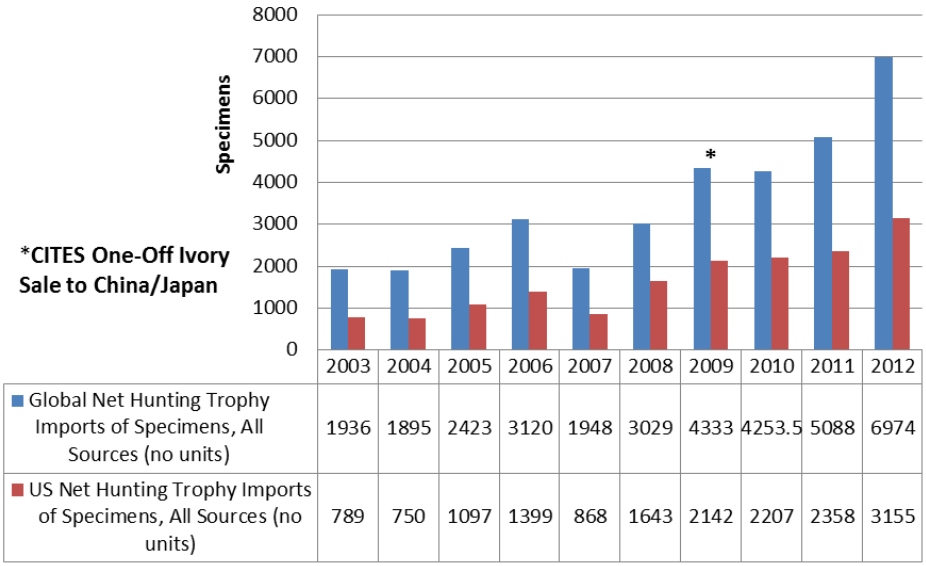
Figure 19: Total Estimated African Elephants Impacted by Gross U.S. Wild-Sourced Hunting Trophy Imports of Elephants and their Parts from Range States between 2003 and 2012, Top Countries

Source: CITES Trade Database, "gross imports" search completed on 7 November, 2014, using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and hunting trophy purpose. Search was conducted separately for all African elephant range states as exporters. Results filtered for gross imports into U.S.

b. African elephant specimens in trade (hunting trophy purpose)

Global imports: Of total global net imports traded between 2003-2012 for all purposes (with no measurable units recorded), 35,000 African elephant specimens were imported for hunting trophy purposes (12% of 281,428 global net specimen imports with no measurable unit).

As Figure 20 illustrates, global net hunting trophy imports of specimens from all sources (no measurable unit recorded) have grown substantially between 2003 and 2012 and the U.S. net hunting trophy imports have steadily increased over the same time period. Global hunting trophy imports of specimens from all sources have steadily increased since 2009, reaching a high of 6,974 specimen imports in 2012 (compared to the lowest number of hunting trophy specimen imports in 2004 of 1,895).

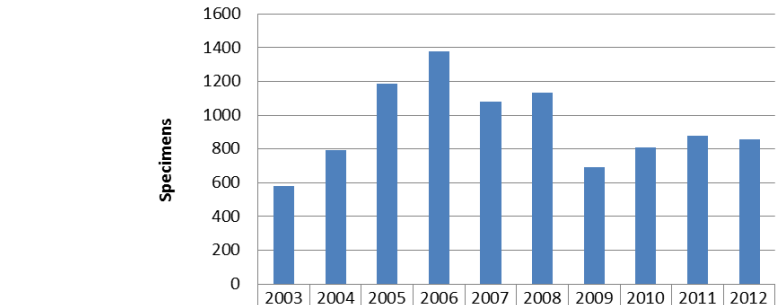


	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global Net Hunting Trophy Imports of Specimens, All Sources (no units)	1936	1895	2423	3120	1948	3029	4333	4253.5	5088	6974
US Net Hunting Trophy Imports of Specimens, All Sources (no units)	789	750	1097	1399	868	1643	2142	2207	2358	3155

Figure 20: Global and U.S. Net Hunting Trophy Imports of African Elephant Specimens, All Sources (No Units) (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, and hunting trophy purpose. Totals were calculated globally and just for US.

The top three items in terms of numbers of global hunting trophy imports of specimens from all sources between 2003 and 2012 are as follows: tusks (9,387 specimens), trophies (7,687 specimens), and skin pieces (3,831 specimens). Global hunting trophy imports of tusks from all sources have been in decline since the highest point of 1,376 imports in 2006 and have remained in the eight hundred import range between 2010 and 2012. Global imports of hunting trophies from all sources have ranged between the lowest number in 2003 (612) and the highest in 2009 (1,145); there has been a general decline since 2009 in the number of global imports. Finally, global imports of hunting trophy skin pieces reached their lowest point with 46 specimens imported from all sources in 2007, but have been steadily increasing with the highest imports of 982 recorded in 2012. *See* Figure 21.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global Net Imports of Hunting Trophy Tusks, All Sources (no units)	583	794	1186	1376	1081	1135	690	808.5	878	856

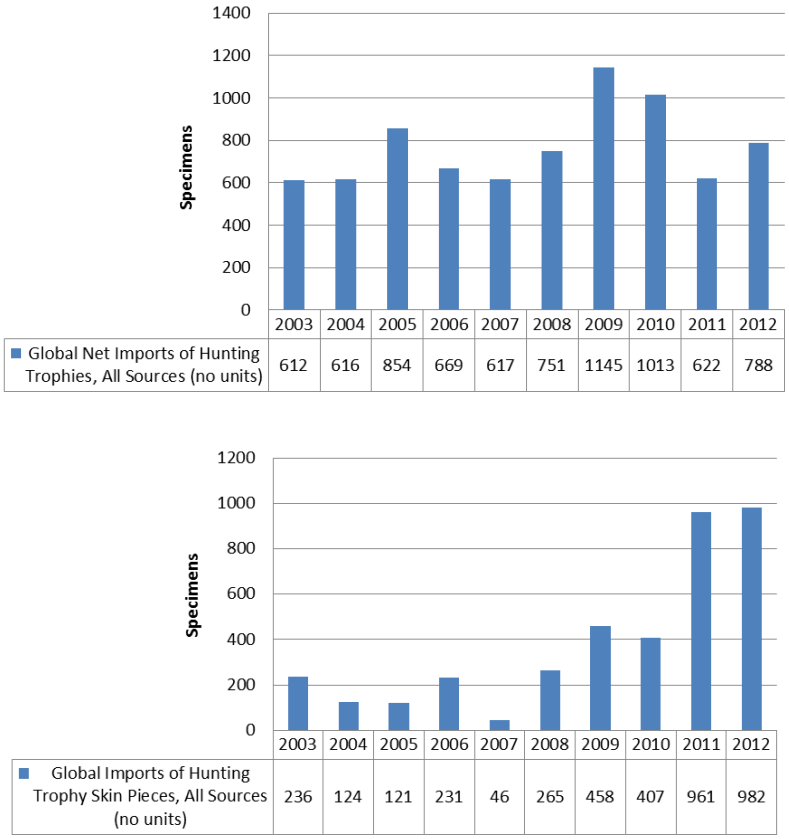


Figure 21: Global Net Imports of Hunting Trophy Tusks, Trophies, and Skin Pieces, All Sources (No Units) (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, and hunting trophy purpose. Filtered for "blank" terms and graphs created for the top imported global specimens: tusks, trophies, and skin pieces.

U.S. imports: Of the 35,000 specimens imported globally between 2003 and 2012 from all sources for hunting trophy purposes, the U.S. imported 16,408 specimens, which is 47% of the total. As Figure 13 illustrates, U.S. net imports of hunting trophy specimens from all sources have increased steadily over the decade analyzed for this Petition. U.S. net imports of hunting trophy specimens from wild sources closely follow this same trend because almost all of the imports were wild-sourced. *See* Figure 22.

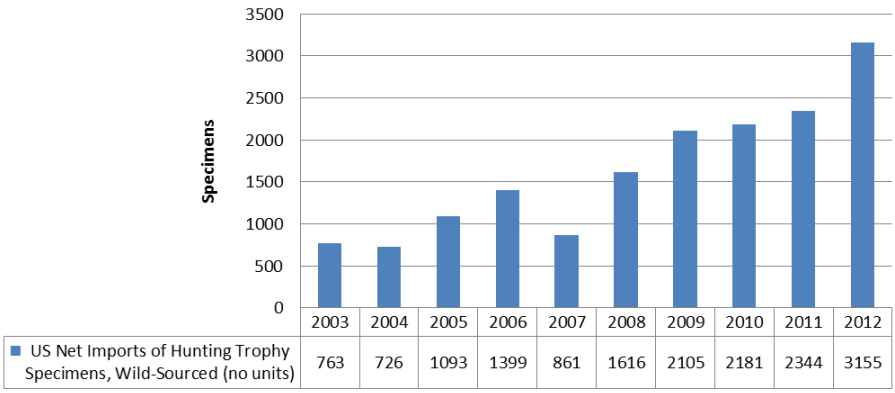
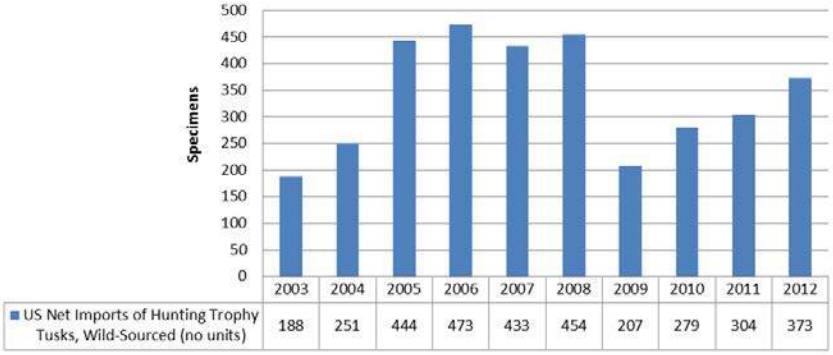


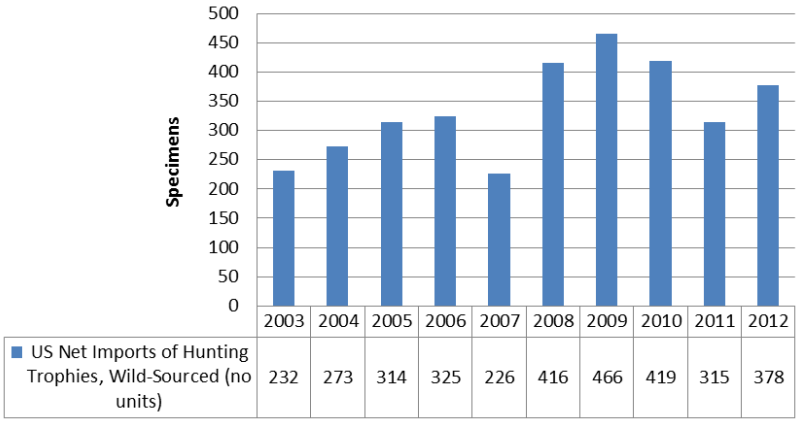
Figure 22: U.S. Net Hunting Trophy Imports of Specimens, Wild-Sourced (no units) (2003-

2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild-sourced, and hunting trophy purpose. Filtered for U.S. and "blank" terms

The top three items in terms of numbers of U.S. net imports of wild-sourced hunting trophy specimens between 2003 and 2012 are as follows: tusks (3,406 specimens, trophies (3,364 specimens, and skin pieces (1,706 specimens). U.S. imports of hunting trophy tusks between 2003 and 2012 reached a high in 2006 with 473 specimens imported. That number dropped to 207 specimens in 2009 but has been steadily increasing up to 373 specimens in 2012. U.S. net imports of wild-sourced hunting trophies reached the lowest point of the decade studied in 2007 with 226 imports and the highest point in 2009 with 416 imports. U.S. net imports of wild-sourced hunting trophy skin pieces have been generally on an upward trend between 2003 and 2010, ranging between 19 imports in 2007 and 386 imports in 2012. *See* Figure 23





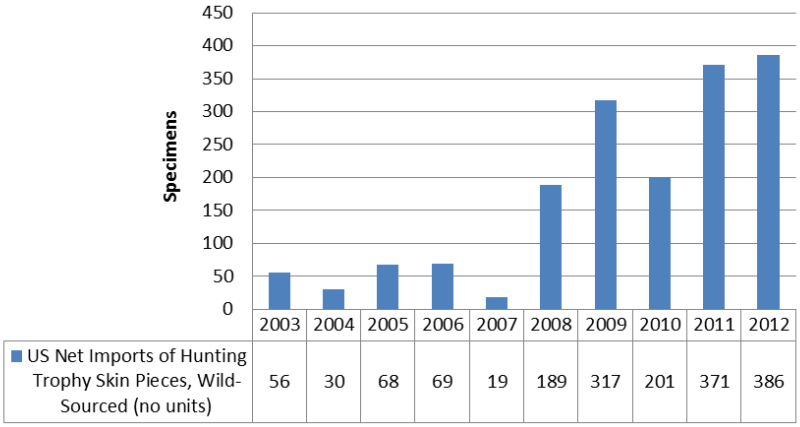


Figure 23: U.S. Net Imports of Hunting Trophy Tusks, Trophies, and Skin Pieces (Wild-Sourced) (No Units) (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild-sourced, and hunting trophy purpose. Filtered for U.S. and "blank" terms and graphs created for the top imported specimens: tusks, trophies, and skin pieces.

3. Personal Purpose

c. Estimated elephants in trade (personal purpose)

Global imports: The original analysis presented in this Petition estimates that between 2003 and 2012 the total number of African elephants reflected by the reported global net personal imports from all sources is 3,105. The number of African elephants reflected by the reported global net personal imports from wild sources is 2,652.

In terms of measurable units, net personal purpose imports of ivory during that year span included approximately 9,257 kg (9.2 metric tons), equivalent to at least 1,390 African elephants (calculation: 9,257 ÷ 6.66 = 1,390 elephants).[276] When this number of elephants is combined with the number of net personal purpose trophy imports (846), body imports (11), and live imports (11) between the years 2003-2012; the total number of African elephants imported for personal purposes in that time span is 2,258 (calculation: 1,390 + 846 + 11 + 11 = 2,258 elephants).

If combined with the number of elephants represented by net imports of tusks for personal purposes from 2003-2012 without an indicated measurable unit such as kilograms, the total number of African elephants imported is 3,105 (calculation: 1,390 + 847 + 846 + 11 + 11 = 3,105 elephants). Almost all of the net imports of African elephant specimens for personal purposes were from wild sourced elephants (2,652 elephants of 3,105 or 85%). *See* Table 17.

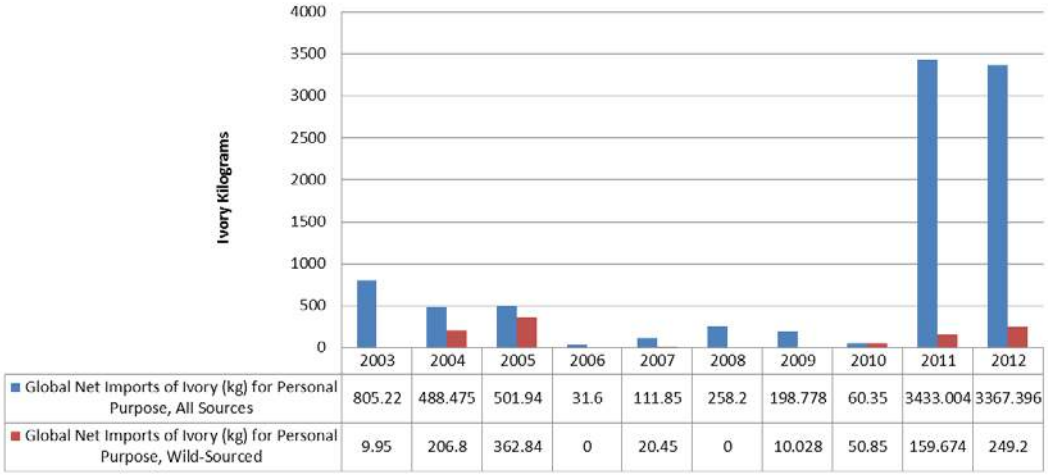
[276] The total weight of net personal imports of ivory specimen (carvings, pieces, scraps, and tusks) for all purposes between 2003 and 2012 is 9,257kg. Using the standard of the average weight of two tusks of one elephants' as 6.66kg, the number of African elephants' represented by that total weight is 1,390.

Table 17: Global Net Personal Imports from 2003 to 2012 (all sources and wild sources)

Global Net Personal Imports from 2003 to 2012 (all sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
49,390	9,257 kg ÷ 6.66kg (avg. weight per tusk) = 1,390 elephants	1,693 (no unit) ÷ 2 (number of tusks per elephant) = 847 elephants	846 trophies = 846 elephants	11 bodies = 11 elephants	11 live = 11 elephants	3,105
Global Net Personal Imports from 2003 to 2012 (*wild* sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
28,048	7,826 kg ÷ 6.66kg (avg. weight per tusk) = 1,175 elephants	1,254 (no unit) ÷ 2 (number of tusks per elephant) = 627 elephants	840 trophies = 840 elephants	9 bodies = 9 elephants	1 live = 1 elephant	2,652

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources and wild-sourced, and personal purpose.

Global imports of ivory (in kilograms) for personal purposes from all sources have spiked to their highest points in 2011 (3,433kg) and 2012 (3,367kg). This is a significant increase compared to 31kg of ivory imported for personal purpose in 2006. However, when one reviews wild-sourced personal purpose ivory (kg) imports between 2003 and 2012, the ivory imported globally for personal purposes was only 160kg in 2011 and 249 in 2012. *See* Figure 24.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global Net Imports of Ivory (kg) for Personal Purpose, All Sources	805.22	488.475	501.94	31.6	111.85	258.2	198.778	60.35	3433.004	3367.396
Global Net Imports of Ivory (kg) for Personal Purpose, Wild-Sourced	9.95	206.8	362.84	0	20.45	0	10.028	50.85	159.674	249.2

Figure 24: Global Net Imports of Ivory (kg) for Personal Purpose, All Sources and Wild Sources (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources and wild-sourced, and personal purpose. Filtered for measurable units, specifically ivory carvings, pieces, and scraps, as well as tusks (in kilograms).

U.S. imports: The analysis presented in this Petition estimates that between 2003 and 2012 the

total of African elephants reflected by the reported U.S. net personal imports from all sources is 228. The number of African elephants reflected by the reported U.S. net personal imports from wild sources is 69.

The U.S. imported 18 kg[277] of all-source ivory equivalent to 3[278] African elephants (calculation: 18 ÷ 6.66 = 3 elephants). When this number of elephants is combined with the number of U.S. net personal purpose trophy imports (116), body imports (1), and live imports (n/a) from all sources between the years 2003-2012, the total number of African elephants imported by U.S. for personal purposes is 120 (calculation: 3 + 116 + 1 = 120).

If combined with the number of elephants represented by net U.S. imports of tusks for personal purposes from 2003-2012 without an indicated measurable unit such as kilograms, the total number of African elephants imported by the U.S. is 228 (calculation: 3 + 108 + 116 + 1 = 228 elephants). Of this total, 30% of the net U.S. imports were from wild-sourced elephants (69 of 228 elephants). *See* Table 18.

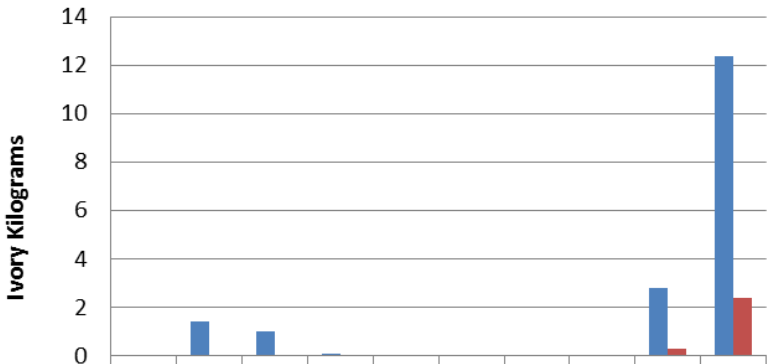
Table 18: U.S. Net Personal Imports, All Sources and Wild-Sourced (2003-2012)

U.S. Net Personal Imports from 2003 to 2012 (all sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
22,164	18 kg ÷ 6.66kg (avg. weight per tusk) = 3 elephants	215 ÷ 2 (number of tusks per elephant)= 108	116 trophies = 116 elephants	1 bodies = 1 elephant	n/a	228
U.S. Net Personal Imports from 2003 to 2012 (*wild* sources)						
All Specimens	**Ivory kg**	**Tusk Specimens**	**Trophies**	**Bodies**	**Live**	**Total Elephants**
11,659	3 kg ÷ 6.66kg (avg. weight per tusk) = n/a elephants	138 ÷ 2 (number of tusks per elephant) = 69	n/a	n/a	n/a	69

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources and wild-sourced, and personal purpose.

U.S. net personal imports of ivory (in kilograms) from all sources was minimal between 2003 and 2010, ranging between 0.05kg and 1.4kg. However, the imports increased to their highest recorded point in 2012, at 12.36kg. Wild-sourced personal imports of ivory have remained lower, with the highest imports in 2012 at 2.36kg. *See* Figure 25.

[277] Calculated by adding the U.S. net import weight (in kilograms) of ivory carvings, ivory pieces, ivory scraps, and tusks imported for commercial purposes from all sources between 2003 and 2012.
[278] The total weight of ivory specimens (carvings, pieces, scraps, and tusks) imported by U.S. for personal purposes between 2003 and 2012 is equal to 18 kg. Using the standard of the average weight of an elephants' two tusks as 6.66kg the number of African elephants' represented by that total weight is 3.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
US Net Personal Imports of Ivory (kg), All Sources	0	1.4	1	0.05	0	0	0	0	2.79	12.36
US Net Personal Imports of Ivory (kg), Wild-Sourced	0	0	0	0	0	0	0	0	0.29	2.36

Figure 25: U.S. Net Personal Purpose Imports of Ivory (kg), All Sources and Wild-Sourced (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources and wild-sourced, and personal purpose. Filtered for U.S. and measurable units, specifically ivory carvings, pieces, and scraps, as well as tusks (in kilograms).

Personal purpose imports from range states: The top global gross personal purpose imports between 2003 and 2012 were from the following African elephant range countries: Zimbabwe (5,810 estimated elephants), South Africa (518 estimated elephants), Tanzania (231 estimated elephants), Cameroon (127 estimated elephants), Botswana (93 estimated elephants), Mozambique (60 estimated elephants), Namibia (53 estimated elephants), and Gabon (50 estimated elephants), among others. *See* Tables 19 and 20; Figure 26.

Table 19: Global Gross Personal Imports of African Elephant Parts, Wild-Sourced (2003-2012)

Global Gross Imports of Wild-Sourced Elephant Parts for Personal Purpose (2003-2012)					
		Zimbabwe	**South Africa**	**Tanzania**	**Cameroon**
Global Gross Number of Imports	Ivory	6,720kg ÷ 6.66kg = 1,009 el.	N/A	N/A	N/A
	Tusks	9,273 ÷ 2 (tusks per elephant) = 4,637 el.	478 ÷ 2 (tusks per elephant) = 239 el.	18 ÷ 2 (tusks per elephant) = 9	16 ÷ 2 (tusks per elephant) = 8 el.
	Trophies	164 el.	80 el.	222 el.	119 el.
	Bodies	N/A	8 el.	N/A	N/A
	Live	N/A	0	N/A	N/A
	Total Elephants	**5,810 el.**	**327 el.**	**231 el.**	**127 el.**

Source: CITES Trade Database, search completed in January 16, 2015 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and personal purpose. Exporting countries selected included: Zimbabwe, South Africa, Tanzania, and Cameroon.

Table 20: Global Gross Personal Imports of African Elephant Parts, Wild-Sourced (2003-2012)

Global Gross Imports of Wild-Sourced Elephant Parts for Personal Purpose (2003-2012)					
		Botswana	**Mozambique**	**Namibia**	**Gabon**
Global Gross Number of Imports	Ivory	N/A	N/A	N/A	5kg ÷ 6.66kg =1 el.
	Tusks	52÷ 2 (tusks per elephant) = 26 el.	N/A	32 ÷ 2 (tusks per elephant) = 16 el.	95 ÷ 2 (tusks per elephant) = 48 el.
	Trophies	66 el.	60 el.	37 el.	1 el.
	Bodies	1 el.	N/A	N/A	N/A
	Live	N/A	N/A	N/A	N/A
	Total Elephants	**93 el.**	**60 el.**	**53 el.**	**50 el.**

Source: CITES Trade Database, search completed in January 16, 2015 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and hunting trophy purpose. Exporting countries selected included: Botswana, Mozambique, Namibia, and Gabon. Filtered for U.S. as importer.

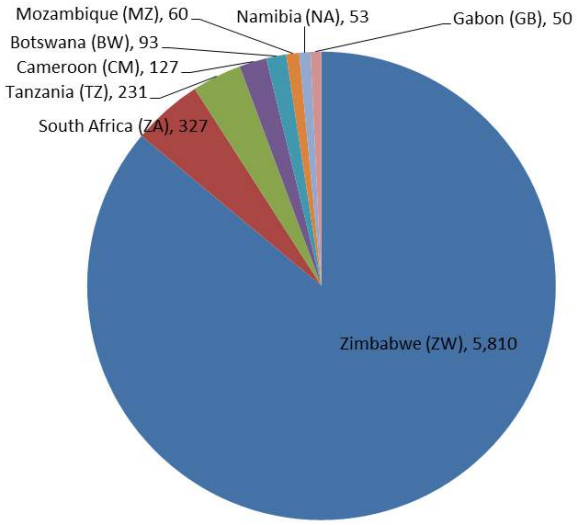


Figure 26: Total Estimated African Elephants Impacted by the Global Gross Wild-Sourced Personal Purpose Imports of Elephants and their Parts from Range States between 2003 and 2012, Top Countries

Source: CITES Trade Database, "gross imports" search completed on 7 November, 2014, using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and personal purpose. Search was conducted separately for all African elephant range states as exporters.

In terms of the role the U.S. has in gross personal purpose imports from African elephant range states, the highest number of elephants imported between 2003 and 2012 are as follows: South Africa (85 estimated elephants), Zimbabwe (65 estimated elephants), Botswana (13 estimated elephants), Namibia (11 estimated elephants), Cameroon (2 estimated elephants), among others. *See* Table 21.

Table 21: U.S. Gross Imports of Wild-Sourced Elephant Parts for Personal Purpose (2003-2012)

U.S. Gross Imports of Wild-Sourced Elephant Parts for Personal Purpose (2003-2012)						
		South Africa	**Zimbabwe**	**Botswana**	**Namibia**	**Cameroon**
U.S. Gross Number of Imports	Ivory	N/A	N/A	N/A	N/A	N/A
	Tusks	83 ÷ 2 (tusks per elephant) = 42 el.	41 ÷ 2 (tusks per elephant) = 21 el.	2 ÷ 2 (tusks per elephant) = 1 el.	2 ÷ 2 (tusks per elephant) = 1 el.	2 ÷ 2 (tusks per elephant) = 1 el.
	Trophies	43 el.	44 el.	12 el.	10 el.	N/A
	Bodies	N/A	N/A	N/A	N/A	N/A
	Live	N/A	N/A	N/A	N/A	N/A
	Total Elephants	**85 el.**	**65 el.**	**13 el.**	**11 el.**	**2 el.**

Source: CITES Trade Database, search completed in January 16, 2015 using the following terms: Loxodonta africana, year range 2003-2012, wild sources, and hunting trophy purpose. Exporting countries selected included: South Africa, Zimbabwe, Botswana, Namibia, and Cameroon. Filtered for U.S. as importer.

a. African elephant specimens in trade (personal purpose)

Global imports: Of total global net imports traded between 2003 and 2012 for all purposes (with no measurable units recorded), 49,390 African elephant specimens were imported from all sources and for personal purpose (18% of the total specimens imported for all purposes and from all sources). In terms of global net personal imports from wild sources, 28,048 specimens were imported between 2003 and 2012.

As Figure 27 illustrates, global net personal imports from all sources (no measurable unit recorded) have grown steadily between 2003 and 2012 (except for a large spike in 2005). U.S. personal imports have not shown a similar increase with respect to non-measurable units. Global personal imports experienced a spike in growth following the 2008/2009 CITES one-off sale of ivory.

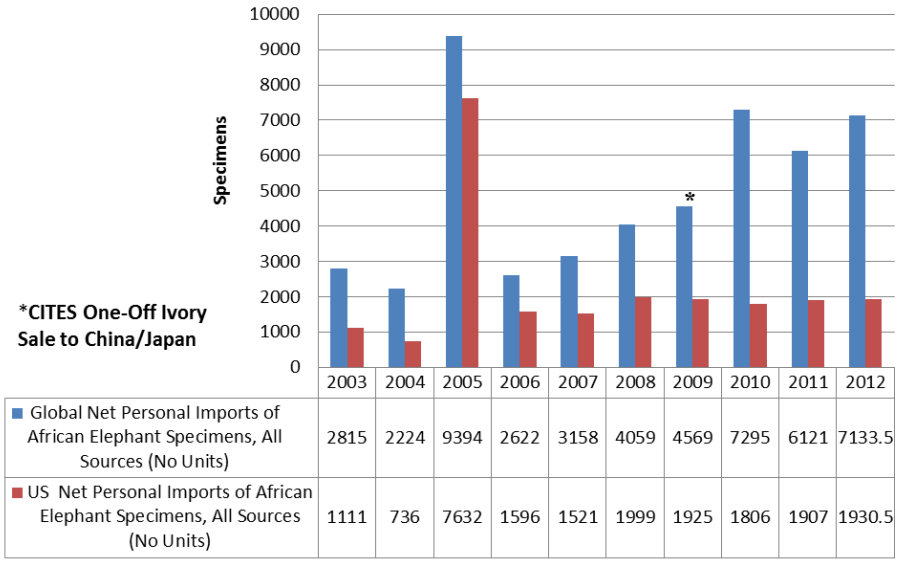
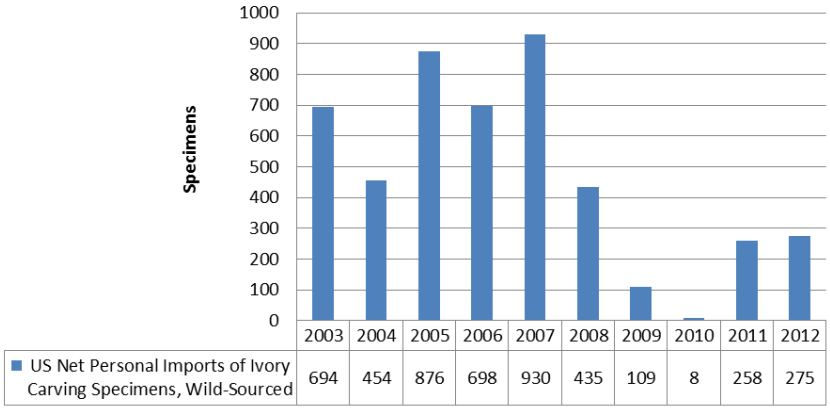


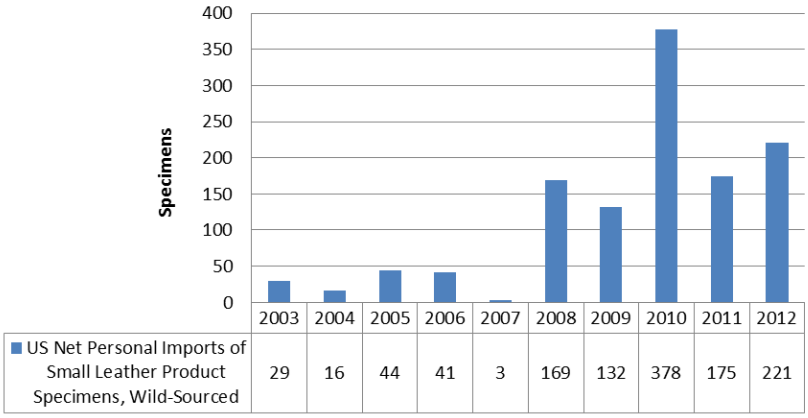
Figure 27: Global and U.S. Net Personal Imports of African Elephant Specimens, All Sources (No Units) (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, all sources, and personal purpose. Totals were calculated globally and for US.

U.S. imports: Of this trade U.S. imported 22,164 African elephant specimens between 2003 and 2012 for personal purpose (without a measurable unit recorded) which is 45% of the total global net imported personal specimens. It also imported 11,659 wild-sourced African elephant specimens between 2003 and 2012.

The top three items in terms of numbers of U.S. net personal imports of wild-sourced specimens between 2003 and 2012 are as follows: ivory carvings (4,737 specimens), small leather products (1,208 specimens), and feet (935 specimens). U.S. net personal imports of wild-sourced ivory carvings have declined since 2007 from the highest point of 930 specimens imported to 275 imports in 2012. U.S. net personal imports of wild-sourced small leather products have generally increased, with the highest imports of 378 specimens in 2010. Finally, U.S. net personal imports of wild-sourced feet specimens were minimal between 2003 and 2008 (ranging between zero and 12) and reached a high of 254 specimens in 2010. *See* Figure 28.





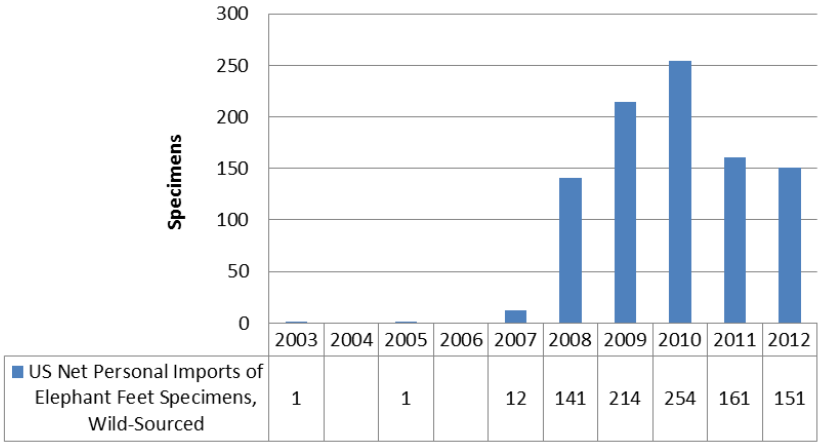


Figure 28: U.S. Net Personal Imports of Ivory Carvings, Small Leather Products, and Feet Specimens, Wild-Sourced (2003-2012)

Source: CITES Trade Database, search completed on September 29th, 2014 using the following terms: Loxodonta africana, year range 2003-2012, wild-sourced, and personal purpose. Filtered for U.S. and "blank" terms and graphs created for the top imported specimens: ivory carvings, small leather products, and feet specimens.

b. International Legal Trade in African Elephants and their Parts by Source Country

There are thirty-seven African elephant range States.[279] According to the CITES Trade Database, imports of African elephants and their parts have been reported from eighteen African elephant range states between 2003 and 2012 and they include: Botswana, Burkina Faso, Cameroon, Côte d'Ivoire, Democratic Republic of Congo, Gabon, Ghana, Kenya, Mozambique, Senegal, South Africa, South Sudan, Swaziland, Tanzania, Zambia, and Zimbabwe. The top five sources of imports, according to totals of imports for commercial, hunting trophy, and personal purpose are South Africa, Botswana, Zimbabwe, Namibia, and Tanzania. Note that the populations of South Africa, Botswana, Zimbabwe and Namibia are the only populations on Appendix II of CITES. Whereas the populations of all other range states are on Appendix I.

Table 22: Thirty-Seven Recognized African Elephant Range States

Angola, Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Republic of Congo, Democratic, Republic of the Congo, Côte d'Ivoire, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Guinea Bissau, Kenya, Liberia, Malawi, Mali, Mozambique, Namibia, Niger, le Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, United Republic of Tanzania, Togo, Uganda, Zambia and Zimbabwe

Below are detailed summaries on the 11 range states from which the U.S. imported wild-sourced African elephants and their parts for all purposes between 2003 and 2012, which demonstrate that the U.S. must list this species as Endangered in order to ensure that such

[279] CITES, *African Elephant Action Plan*, CITES COP15 INF. 68 (2010) *available at* http://cmsdata.iucn.org/downloads/e15i_68.pdf (last visited Nov. 5, 2014).

imports only occur for purposes that promote the conservation of the species. The countries are listed from greatest number of estimated African elephants impacted by the U.S. imports to smallest: Zimbabwe, Botswana, South Africa, Namibia, Tanzania, Zambia, Cameroon, Ghana, Gabon, Mozambique, and Kenya. Data for other range states that exported African elephants and their parts between 2003 and 2012, but from which the U.S. did not import specimens, can be found throughout the Appendix of this petition.

i. Zimbabwe

African elephants of Zimbabwe have been listed on Appendix II of CITES since 1997. Tables 23 and 24 summarize that 969 African elephants were impacted by global commercial imports from Zimbabwe between 2003 and 2012. 7,238 African elephants were impacted by global hunting trophy imports from Zimbabwe between 2003 and 2012. 1,416 African elephants were impacted by global personal imports from Zimbabwe between 2003 and 2012. Between 2003 and 2012, U.S. imports of hunting trophies were the largest category 3,729 estimated elephants.

Table 23: Gross Number of Global Imports of Wild-Sourced African Elephant Specimens from Zimbabwe between 2003-2012, Adjusted for other Origins

	ZIMBABWE 2003-2012: GLOBAL IMPORTS					
	Wild-Sourced Elephants for *Commercial Purpose*		**Wild-Sourced Elephants for *Hunting Trophy Purpose***		**Wild-Sourced Elephants for *Personal Purpose***	
	Term	**# Eleph**	**Term**	**# Eleph**	**Term**	**# Eleph**
Global Gross Number of Imports from Zimbabwe	Ivory	3,821kg ÷ 6.66kg = 574	Ivory	20,249kg ÷ 6.66kg = 3,040	Ivory	6,718kg ÷ 6.66kg = 1,009
	Tusks	457 ÷ 2 (tusks per elephant) = 229	Tusks	3,168 ÷ 2 (tusks per elephant) = 1,584	Tusks	485 ÷ 2 (tusks per elephant) = 243
	Trophies	159	Trophies	2,614	Trophies	164
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	7	Live	N/A	Live	N/A
	Total Elephants	**969**	**Total Elephants**	**7,238**	**Total Elephants**	**1,416**

Table 24: Gross Number of U.S. Imports of Wild-Sourced African Elephant Specimens from Zimbabwe between 2003-2012, Adjusted for other Origins

ZIMBABWE 2003-2012: UNITED STATES IMPORTS						
	Wild-Sourced Elephants for Commercial Purpose		**Wild-Sourced Elephants for Hunting Trophy Purpose**		**Wild-Sourced Elephants for Personal Purpose**	
	Term	**# Eleph**	**Term**	**# Eleph**	**Term**	**# Eleph**
US Gross Number of Imports from	Ivory	N/A	Ivory	10,404kg ÷ 6.66kg = 1,562	Ivory	N/A

Zimbabwe	Tusks	175 ÷ 2 (tusks) = 88	Tusks	1,247 ÷ 2 (tusks) = 624	Tusks	42 ÷ 2 (tusks) = 21
	Trophies	21	Trophies	1,543	Trophies	44
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	7	Live	N/A	Live	N/A
	Total Elephants	**116**	**Total Elephants**	**3,729**	**Total Elephants**	**65**

ii. Botswana

The African elephants of Botswana have been listed on Appendix II of CITES since 1997. Botswana also currently bans hunting of certain species, including elephants.[280] Tables 25 and 26 summarizes that 9,553 African elephants were impacted by global commercial imports from Botswana between 2003 and 2012. 3,284 African elephants were impacted by global hunting trophy imports from Botswana between 2003 and 2012. 93 African elephants were impacted by global personal imports from Botswana between 2003 and 2012. Gross 2003-2012 U.S. imports of hunting trophies made up the majority of US imports (1,487 estimated elephants).

Table 25: Gross Number of Global Imports of Wild-Sourced African Elephant Specimens from Botswana between 2003-2012, Adjusted for other Origins

BOTSWANA 2003-2012: GLOBAL IMPORTS						
	Wild-Sourced Elephants for *Commercial Purpose*		**Wild-Sourced Elephants for *Hunting Trophy Purpose***		**Wild-Sourced Elephants for *Personal Purpose***	
	Term	**# Eleph**	**Term**	**# Eleph**	**Term**	**# Eleph**
Global Gross Number of Imports from Botswana	Ivory	43,171 kg ÷ 6.66kg = 6,482	Ivory	198kg ÷ 6.66kg = 30	Ivory	N/A
	Tusks	6,134 ÷ 2 (tusks per elephant) = 3,067	Tusks	2,490 ÷ 2 (tusks per elephant) = 1,245	Tusks	52 ÷ 2 (tusks per elephant) = 26
	Trophies	4	Trophies	2002	Trophies	66
	Bodies	N/A	Bodies	7	Bodies	1
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	**9,553**	**Total Elephants**	**3,284**	**Total Elephants**	**93**

[280] *Botswana hunting ban takes effect*, All Africa (23 Jan 2014), available at http://allafrica.com/stories/201401240031.html (last visited Nov. 26, 2014).

Table 26: Gross Number of U.S. Imports of Wild-Sourced African Elephant Specimens from Botswana between 2003-2012, Adjusted for other Origins

BOTSWANA 2003-2012: UNITED STATES IMPORTS						
	Wild-Sourced Elephants for Commercial Purpose		**Wild-Sourced Elephants for Hunting Trophy Purpose**		**Wild-Sourced Elephants for Personal Purpose**	
	Term	**# Eleph**	**Term**	**# Eleph**	**Term**	**# Eleph**
US Gross Number of Imports from Botswana	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	N/A	Tusks	1003 ÷ 2 (tusks per elephant) = 502	Tusks	51 ÷ 2 (tusks per elephant) = 26
	Trophies	3	Trophies	985	Trophies	12
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	**3**	**Total Elephants**	**1,487**	**Total Elephants**	**92**

iii. South Africa

The African elephants of South Africa have been listed on Appendix II of CITES since 2000. Tables 27 and 28 summarize gross imports of wild-sourced African elephant specimens from South Africa between 2003 and into the U.S. 15,255 African elephants were impacted by global commercial imports from South Africa between 2003 and 2012. 1,892 African elephants were impacted by global hunting trophy imports from South Africa between 2003 and 2012. 327 African elephants were impacted by global personal imports from South Africa between 2003 and 2012. Gross 2003-2012 U.S. imports of hunting trophies made up the majority of these imports (1,286 elephants).

Table 27: Gross Number of Global Imports of Wild-Sourced African Elephant Specimens from South Africa between 2003-2012, Adjusted for other Origins

SOUTH AFRICA 2003-2012: GLOBAL IMPORTS						
	Wild-Sourced Elephants for *Commercial Purpose*		**Wild-Sourced Elephants for *Hunting Trophy Purpose***		**Wild-Sourced Elephants for *Personal Purpose***	
	Term	**# Eleph**	**Term**	**# Eleph**	**Term**	**# Eleph**
Global Gross Number of Imports from South Africa	Ivory	101,537 kg ÷ 6.66kg = 15,246	Ivory	90 kg ÷ 6.66kg = 14	Ivory	N/A
	Tusks	12 ÷ 2 (tusks per elephant) = 6	Tusks	1,816 ÷ 2 (tusks per elephant) = 908	Tusks	478 ÷ 2 (tusks per elephant) = 239
	Trophies	3	Trophies	966	Trophies	80
	Bodies	0	Bodies	4	Bodies	8
	Live	0	Live	0	Live	0
	Total Elephants	**15,255**	**Total Elephants**	**1,892**	**Total Elephants**	**327**

Table 28: Gross Number of U.S. Imports of Wild-Sourced African Elephant Specimens from South Africa between 2003-2012, Adjusted for other Origins

SOUTH AFRICA 2003-2012: UNITED STATES IMPORTS						
	Wild-Sourced Elephants for Commercial Purpose		**Wild-Sourced Elephants for Hunting Trophy Purpose**		**Wild-Sourced Elephants for Personal Purpose**	
	Term	**# Eleph**	**Term**	**# Eleph**	**Term**	**# Eleph**
US Gross Number of Imports from South Africa	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	4 ÷ 2 (tusks per elephant) = 2	Tusks	853 ÷ 2 (tusks per elephant) = 474	Tusks	82 ÷ 2 (tusks per elephant) = 46
	Trophies	3	Trophies	859	Trophies	43
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	**5**	**Total Elephants**	**1,286**	**Total Elephants**	**84**

iv. Namibia

The African elephants of Namibia have been listed on Appendix II of CITES since 1997. Tables 29 and 30 summarize gross imports of wild-sourced African elephant specimens from Namibia between 2003 and into the U.S. 2,257 African elephants were impacted by global commercial imports from

Namibia between 2003 and 2012. 876 African elephants were impacted by global hunting trophy imports from Namibia between 2003 and 2012. 53 African elephants were impacted by global personal imports from Namibia between 2003 and 2012. Gross 2003-2012 U.S. imports of hunting trophies made up nearly all of these imports (316 elephants).

Table 29: Gross Number of Global Imports of Wild-Sourced African Elephant Specimens from Namibia between 2003-2012, Adjusted for other Origins

NAMIBIA 2003-2012: GLOBAL IMPORTS						
	Wild-Sourced Elephants for *Commercial Purpose*		**Wild-Sourced Elephants for *Hunting Trophy Purpose***		**Wild-Sourced Elephants for *Personal Purpose***	
	Term	**# Eleph**	**Term**	**# Eleph**	**Term**	**# Eleph**
Global Gross Number of Imports from Namibia	Ivory	15,008 kg ÷ 6.66kg = 2,253	Ivory	N/A	Ivory	N/A
	Tusks	6 ÷ 2 (tusks per elephant) = 3	Tusks	777 ÷ 2 (tusks per elephant) = 389	Tusks	32 ÷ 2 (tusks per elephant) = 16
	Trophies	1	Trophies	487	Trophies	37
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	**2,257**	**Total Elephants**	**876**	**Total Elephants**	**53**

Table 30: Gross Number of U.S. Imports of Wild-Sourced African Elephant Specimens from Namibia between 2003-2012, Adjusted for other Origins

NAMIBIA 2003-2012: UNITED STATES IMPORTS						
	Wild-Sourced Elephants for Commercial Purpose		**Wild-Sourced Elephants for Hunting Trophy Purpose**		**Wild-Sourced Elephants for Personal Purpose**	
	Term	**# Eleph**	**Term**	**# Eleph**	**Term**	**# Eleph**
US Gross Number of Imports from Namibia	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	N/A	Tusks	266 ÷ 2 (tusks per elephant) = 133	Tusks	2 ÷ 2 (tusks per elephant) = 1
	Trophies	N/A	Trophies	183	Trophies	10
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	N/A	**Total Elephants**	**316**	**Total Elephants**	**11**

v. Tanzania

The African elephants of Tanzania have been listed on Appendix I of CITES since 1990. Tables 31 and 32 summarize gross imports of wild-sourced African elephant specimens from Tanzania between 2003 and into the U.S. 1 African elephant was impacted by global commercial imports from Tanzania between 2003 and 2012. 1,376 African elephants were impacted by global hunting trophy imports from Tanzania between 2003 and 2012. 231 African elephants were impacted by global personal imports from Tanzania between 2003 and 2012. Gross 2003-2012 U.S. imports of hunting trophies accounted for all of these imports.

Table 31: Gross Number of Global Imports of Wild-Sourced African Elephant Specimens from Tanzania between 2003-2012, Adjusted for other Origins

TANZANIA 2003-2012: GLOBAL IMPORTS						
	Wild-Sourced Elephants for *Commercial Purpose*		**Wild-Sourced Elephants for *Hunting Trophy Purpose***		**Wild-Sourced Elephants for *Personal Purpose***	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
Global Gross Number of Imports from Tanzania	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	N/A	Tusks	973÷ 2 (tusks per elephant) = 487	Tusks	18 ÷ 2 (tusks per elephant) = 9
	Trophies	1	Trophies	888	Trophies	222
	Bodies	N/A	Bodies	1	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	**1**	**Total Elephants**	**1,376**	**Total Elephants**	**231**

Table 32: Gross Number of U.S. Imports of Wild-Sourced African Elephant Specimens from Tanzania between 2003-2012, Adjusted for other Origins

TANZANIA 2003-2012: UNITED STATES IMPORTS						
	Wild-Sourced Elephants for Commercial Purpose		**Wild-Sourced Elephants for Hunting Trophy Purpose**		**Wild-Sourced Elephants for Personal Purpose**	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
US Gross Number of Imports from Tanzania	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	N/A	Tusks	N/A	Tusks	N/A
	Trophies	N/A	Trophies	337	Trophies	N/A
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	**N/A**	**Total Elephants**	**337**	**Total Elephants**	**N/A**

vi. Zambia

The African elephants of Zambia have been listed on Appendix I of CITES since 1990. Zambia

also currently has an active ban on the hunting of certain species, including elephants.[281] Tables 33 and 34 summarize gross imports of wild-sourced African elephant specimens from Zambia between 2003 and into the U.S. There were no African elephants impacted by global commercial imports from Zambia between 2003 and 2012. 129 African elephants were impacted by global hunting trophy imports from Zambia between 2003 and 2012. 16 African elephants were impacted by global personal imports from Zambia between 2003 and 2012. Gross 2003-2012 U.S. imports of hunting trophies made up all of these imports.

Table 33: Gross Number of Global Imports of Wild-Sourced African Elephant Specimens from Zambia between 2003-2012, Adjusted for other Origins

ZAMBIA 2003-2012: GLOBAL IMPORTS						
	Wild-Sourced Elephants for *Commercial Purpose*		**Wild-Sourced Elephants for *Hunting Trophy Purpose***		**Wild-Sourced Elephants for *Personal Purpose***	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
Global Gross Number of Imports from Zambia	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	N/A	Tusks	181 ÷ 2 (tusks per elephant) = 91	Tusks	7 ÷ 2 (tusks per elephant) = 4
	Trophies	N/A	Trophies	38	Trophies	12
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	N/A	**Total Elephants**	**129**	**Total Elephants**	**16**

Table 34: Gross Number of U.S. Imports of Wild-Sourced African Elephant Specimens from Zambia between 2003-2012, Adjusted for other Origins

ZAMBIA 2003-2012: UNITED STATES IMPORTS						
	Wild-Sourced Elephants for Commercial Purpose		**Wild-Sourced Elephants for Hunting Trophy Purpose**		**Wild-Sourced Elephants for Personal Purpose**	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
US Gross Number of Imports from Zambia	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	÷ 2 (tusks per elephant) = 10	Tusks	18 ÷ 2 (tusks per elephant) = 9	Tusks	N/A
	Trophies	N/A	Trophies	11	Trophies	N/A
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	**N/A**	**Total Elephants**	**20**	**Total Elephants**	N/A

[281] J. Kunda. *Zambia: Hunting Ban On Elephants Still On*, All Africa (4 Sep 2014), available at http://allafrica.com/stories/201409050096.html (last visited Nov. 26, 2014).

vii. Cameroon

The African elephants of Cameroon have been listed on Appendix I of CITES since 1990. Tables 35 and 36 summarize gross imports of wild-sourced African elephant specimens from Cameroon between 2003 and into the U.S. Only two African elephants were impacted by global commercial imports from Cameroon between 2003 and 2012. 612 African elephants were impacted by global hunting trophy imports from Cameroon between 2003 and 2012. 137 African elephants were impacted by global personal imports from Cameroon between 2003 and 2012. Gross 2003-2012 U.S. imports of hunting trophies amounted to 1 estimated elephant, and imports for personal purpose also amounted to 1 elephant.

Table 35: Gross Number of Global Imports of Wild-Sourced African Elephant Specimens from Cameroon between 2003-2012, Adjusted for other Origins

CAMEROON 2003-2012: GLOBAL IMPORTS						
	Wild-Sourced Elephants for *Commercial Purpose*		**Wild-Sourced Elephants for *Hunting Trophy Purpose***		**Wild-Sourced Elephants for *Personal Purpose***	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
Global Gross Number of Imports from Cameroon	Ivory	N/A	Ivory	36kg ÷ 6.66kg = 5	Ivory	N/A
	Tusks	2 ÷ 2 (tusks per elephant) = 1	Tusks	340 ÷ 2 (tusks per elephant) = 170	Tusks	16 ÷ 2 (tusks per elephant) = 8
	Trophies	1	Trophies	435	Trophies	119
	Bodies	N/A	Bodies	2	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	**2**	**Total Elephants**	**612**	**Total Elephants**	**137**

Table 36: Gross Number of U.S. Imports of Wild-Sourced African Elephant Specimens from Cameroon between 2003-2012, Adjusted for other Origins

CAMEROON 2003-2012: UNITED STATES IMPORTS						
	Wild-Sourced Elephants for Commercial Purpose		**Wild-Sourced Elephants for Hunting Trophy Purpose**		**Wild-Sourced Elephants for Personal Purpose**	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
US Gross Number of Imports from Cameroon	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	N/A	Tusks	N/A	Tusks	2 ÷ 2 (tusks per elephant) = 1
	Trophies	N/A	Trophies	1	Trophies	N/A
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A

	Total Elephants	N/A	**Total Elephants**	1	**Total Elephants**	1

viii. Ghana

The African elephants of Ghana have been listed on Appendix II of CITES since 1997. Tables 37 and 38 summarize gross imports of wild-sourced African elephant specimens from Ghana between 2003 and into the U.S. No African elephants were impacted by global commercial or hunting trophy imports from Ghana between 2003 and 2012. The total previous cited, African elephant parts that represent 6 elephants, were all imported for personal purposes from Ghana between 2003 and 2012. Gross 2003-2012 U.S. imports for personal purpose imports accounted for all imports.

Table 37: Gross Number of Global Imports of Wild-Sourced African Elephant Specimens from Ghana between 2003-2012, Adjusted for other Origins

GHANA 2003-2012: GLOBAL IMPORTS						
	Wild-Sourced Elephants for *Commercial Purpose*		**Wild-Sourced Elephants for *Hunting Trophy Purpose***		**Wild-Sourced Elephants for *Personal Purpose***	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
Global Gross Number of Imports from Ghana	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks		Tusks	N/A	Tusks	11 ÷ 2 (tusks per elephant) = 6
	Trophies	N/A	Trophies	N/A	Trophies	N/A
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	N/A	**Total Elephants**	N/A	**Total Elephants**	6

Table 38: Gross Number of U.S. Imports of Wild-Sourced African Elephant Specimens from Ghana between 2003-2012, Adjusted for other Origins

GHANA 2003-2012: UNITED STATES IMPORTS						
	Wild-Sourced Elephants for Commercial Purpose		**Wild-Sourced Elephants for Hunting Trophy Purpose**		**Wild-Sourced Elephants for Personal Purpose**	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
US Gross Number of Imports from Ghana	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	N/A	Tusks	N/A	Tusks	1 ÷ 2 (tusks per elephant) = .5
	Trophies	N/A	Trophies	N/A	Trophies	N/A
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	N/A	**Total Elephants**	N/A	**Total Elephants**	.5

ix. Gabon

The African elephants of Gabon have been listed on Appendix II of CITES since 1997. Tables 39 and 40 summarize gross imports of wild-sourced African elephant specimens from Gabon between 2003 and into the U.S. No African elephants were impacted by global commercial or hunting trophy imports from Gabon between 2003 and 2012. All 50 estimated elephants were imported for personal purposes from Gabon between 2003 and 2012. Gross 2003-2012 U.S. imports for personal purpose imports accounted for all imports.

Table 39: Gross Number of Global Imports of Wild-Sourced African Elephant Specimens from Gabon between 2003-2012, Adjusted for other Origins

GABON 2003-2012: GLOBAL IMPORTS						
	Wild-Sourced Elephants for *Commercial Purpose*		**Wild-Sourced Elephants for *Hunting Trophy Purpose***		**Wild-Sourced Elephants for *Personal Purpose***	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
Global Gross Number of Imports from Gabon	Ivory	N/A	Ivory	N/A	Ivory	(5.04 kg ÷ 6.66kg = 1
	Tusks	N/A	Tusks	N/A	Tusks	96 ÷ 2 (tusks per elephant) = 48
	Trophies	N/A	Trophies	2	Trophies	1
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	N/A	**Total Elephants**	**2**	**Total Elephants**	**50**

Table 40: Gross Number of U.S. Imports of Wild-Sourced African Elephant Specimens from Gabon between 2003-2012, Adjusted for other Origins

GABON 2003-2012: UNITED STATES IMPORTS						
	Wild-Sourced Elephants for Commercial Purpose		**Wild-Sourced Elephants for Hunting Trophy Purpose**		**Wild-Sourced Elephants for Personal Purpose**	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
US Gross Number of Imports from Gabon	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	N/A	Tusks	N/A	Tusks	2 ÷ 2 (tusks per elephant) 1
	Trophies	N/A	Trophies	N/A	Trophies	N/A
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	N/A	**Total Elephants**	N/A	**Total Elephants**	1

x. Mozambique

The African elephants of Mozambique have been listed on Appendix I of CITES since 1990. Tables 41 and 42 summarize gross imports of wild-sourced African elephant specimens from Mozambique between 2003 and into the U.S. Only two African elephants were impacted by global commercial imports from Mozambique between 2003 and 2012. 713 African elephants were impacted by global hunting trophy imports from Mozambique between 2003 and 2012. 60 African elephants were impacted by global personal imports from Mozambique between 2003 and 2012. Gross 2003-2012 U.S. imports for hunting trophy purpose amounted to 1 estimated elephant.

Table 41: Gross Number of Global Imports of Wild-Sourced African Elephant Specimens from Mozambique between 2003-2012, Adjusted for other Origins

MOZAMBIQUE 2003-2012: GLOBAL IMPORTS						
	Wild-Sourced Elephants for *Commercial Purpose*		**Wild-Sourced Elephants for *Hunting Trophy Purpose***		**Wild-Sourced Elephants for *Personal Purpose***	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
Global Gross Number of Imports from Mozambique	Ivory	N/A	Ivory	208 ÷ 6.66kg = 31	Ivory	N/A
	Tusks	3 ÷ 2 (tusks per elephant) = 2	Tusks	663 ÷ 2 (tusks per elephant) = 332	Tusks	N/A
	Trophies	N/A	Trophies	350	Trophies	60
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	**2**	**Total Elephants**	**713**	**Total Elephants**	**60**

Table 42: Gross Number of U.S. Imports of Wild-Sourced African Elephant Specimens from Mozambique between 2003-2012, Adjusted for other Origins

MOZAMBIQUE 2003-2012: UNITED STATES IMPORTS						
	Wild-Sourced Elephants for Commercial Purpose		**Wild-Sourced Elephants for Hunting Trophy Purpose**		**Wild-Sourced Elephants for Personal Purpose**	
	Term	**# Eleph.**	**Term**	**# Eleph.**	**Term**	**# Eleph.**
US Gross Number of Imports from Mozambique	Ivory	N/A	Ivory	N/A	Ivory	N/A
	Tusks	N/A	Tusks	2 ÷ 2 (tusks per elephant) 1	Tusks	N/A
	Trophies	N/A	Trophies	N/A	Trophies	N/A
	Bodies	N/A	Bodies	N/A	Bodies	N/A
	Live	N/A	Live	N/A	Live	N/A
	Total Elephants	**N/A**	**Total Elephants**	**1**	**Total Elephants**	**N/A**

c. International Illegal Trade in African Elephant and their Parts

i. Legal commercial trade in ivory has stimulated illegal trade

As demonstrated through the original analysis in this petition, the scope of currently legal international trade in ivory is quite large, but it pales in comparison to the illegal trade in ivory. The U.S. must further restrict its imports of African elephant parts and products in order to prevent continued overutilization of this species.

A study by Wittemyer (2014) estimated that approximately 33,630 elephants were poached every year between 2010 and 2012, amounting to the deaths of nearly 100,000 African elephants in that three-year period. This rate of poaching is not biologically sustainable and clearly constitutes over-utilization.

Evidence shows a strong link between legal trade in African elephant ivory, and the recent increased demand for ivory. In 1989, the CITES Parties listed the African elephant on Appendix I, which prohibited international commercial trade in African elephant ivory beginning in 1990. (The Asian elephant was already on Appendix I and so international trade in Asian elephant ivory was already prohibited under CITES.) In subsequent years, ivory-carving industries in the main ivory consumer countries of Japan and China dwindled and ivory demand subsided. A continent-wide survey[282] to evaluate the impact of the Appendix I listing in 15 African ivory countries found that each of the surveyed countries, apart from Nigeria, demonstrated a decline in demand for ivory and a drop in the size of ivory markets where illegal ivory was traditionally sold. As further evidence of the positive impact of the CITES ivory trade ban, the volume of ivory seized worldwide declined from 1989 to 1994 and was stable from then until 1998.[283]

However, after 1998, two CITES-sanctioned sales of large amounts of stockpiled ivory from four southern African countries to two Asian ivory consumer countries created a partial lifting of the 1989 ban. In 1997, the CITES Parties transferred the African elephant populations of Botswana, Namibia and Zimbabwe to Appendix II and in 1999, 49,574 kg of stockpiled ivory from those countries were exported to Japan where it could be used for sale only on the domestic market (not for export). In 2000, the CITES Parties transferred the elephant population of South Africa to Appendix II. In 2009 the four countries with populations on Appendix II exported 107,770 kg of stockpiled ivory to Japan and China where it could be used for sale on the domestic market.

The partial lifting of the ban and the flow of ivory to Japan and China stimulated ivory markets in those countries, creating a large market demand that could not be completely met by the legal ivory trade. This led directly to increased levels of poaching and illegal ivory trade. The volume of ivory seizures increased substantially after 1999 even more so after 2008, particularly those shipments destined for China. *See* Figure 29.

[282] E. Martin & D. Stiles, The Ivory Markets of Africa (March 2000), available at http://danstiles.org/publications/ivory/01.2000%20Africa.pdf (last visited Jan. 19, 2015).
[283] CITES, *Illegal ivory trade*.

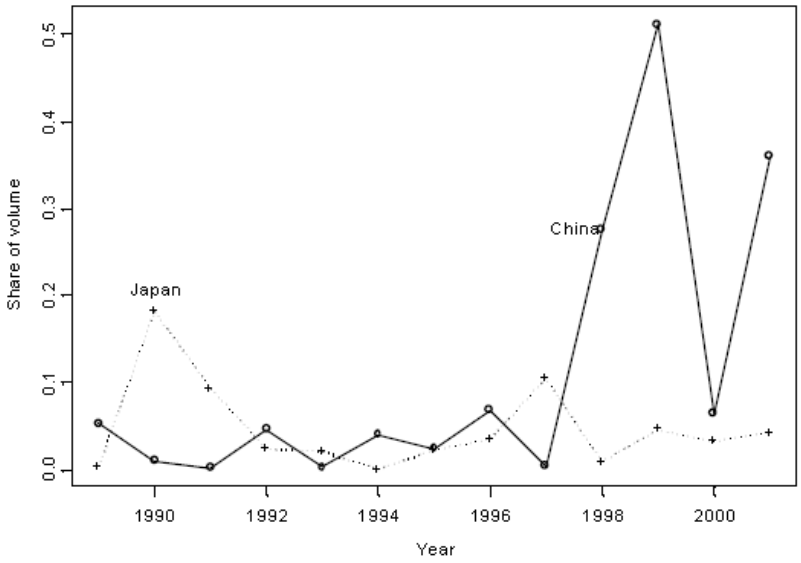


Figure 29: China's and Japan's share of the total volume of seized ivory represented by the ETIS data (28 August 2002)

Source: T. Milliken, R. W. Burn and L. Sangalakula, Illegal Trade in Ivory and other Elephant Specimens, CoP12 Doc. 34.1 (2002).

According to a 2002 Elephant Trade Information System (ETIS) report "As can be seen [in the figure above], China's role as a destination for illegal consignments of ivory was fairly minor from 1989 through 1997. Thereafter, however, China emerges as the single most important destination for ivory that has been seized and reported to ETIS."[284] Moreover, in Figure 30 ETIS data reveals that there was a significant increase in seizures of raw and worked ivory following 1997.

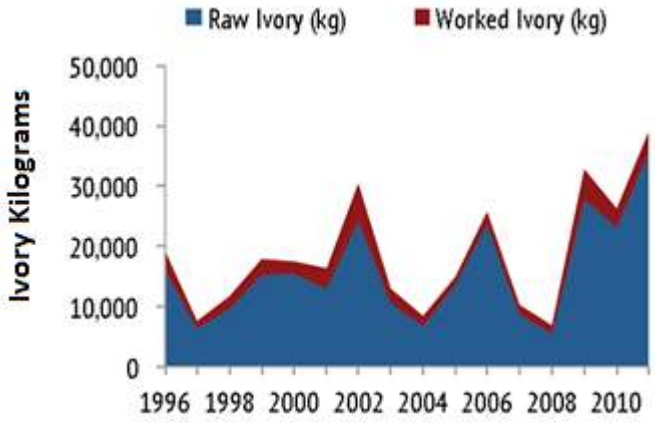


Figure 30: Ivory Seizures by Type between 1996 and 2011 (ETIS)

Source: Varun Vira, Thomas Ewing, and Jackson Miller, Out of Africa: Mapping the Global Trade in Illicit Elephant Ivory, 2014 pg. 1-59 (2014).

[284] T. Milliken et al., *Illegal Trade in Ivory and other Elephant Specimens*, CoP12 Doc. 34.1 (2002), *available at* http://www.cites.org/sites/default/files/eng/cop/12/doc/E12-34-1.pdf (last visited Jan. 19, 2015). [hereinafter "Milliken et al., *Illegal Trade in Ivory*"].

According to Vira et al. (2014) the 2009 ivory sale "coincided with a massive surge in ivory-related demand, reaching unprecedented levels."[285] In fact, following the legal sale to China "the wholesale price of ivory has exploded in China. Once pegged at $450/kg in Fuzhou in 2010, by 2014 the same researchers concluded that wholesale prices had almost tripled to $2,100/kg."[286]

A 2013 ETIS report to CITES states that there was "a progressively sharper and statistically significant increase in illicit ivory trade from 2008 onwards."[287] Figure 30 illustrates the drastic increase in ivory seizures following 2008, whereby seizures of raw and worked ivory surpassed those of all previous years studied (from 1996 to 2008). Figure 31 below also shows that along with an increase in ivory seizures, the trend in the proportion of illegally killed elephants (PIKE) has also spiked after 2009 to its highest levels since 2002 and has continued to increase. Moreover, the percentage of illegally killed elephants has exceeded the offtake sustainability limit, the natural reproduction rate, since 2010.

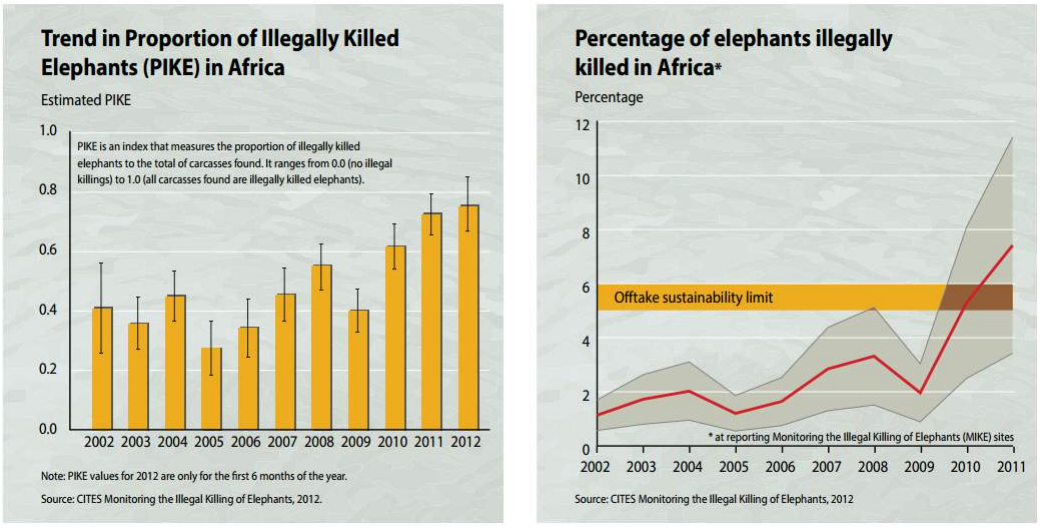


Figure 31: Trend in Proportion of Illegal Killed Elephants (PIKE) in Africa and Percentage of elephants illegally killed in Africa

Source: UNEP, CITES, IUCN, TRAFFIC (2013). Elephants in the Dust – The African Elephant Crisis. A Rapid Response Assessment. United Nations Environment Programme, GRID-Arendal.

Figure 32 confirms that the illegal offtake was still unsustainable as of 2013.

[285] V. Vira et al., *Out of Africa: Mapping the Global Trade in Illicit Elephant Ivory*, 2014 1-59 (2014), available at http://a362a94f6d3f5f370057-c70bddd8faa4afe1b2ec557b907836d0.r4.cf1.rackcdn.com/Out-of-Africa-2014.pdf (last visited Nov. 4, 2014) [hereinafter "Vira et al., *Out of Africa*"].
[286] Vira et al., *Out of Africa*.
[287] T. Milliken et al., ETIS Report of TRAFFIC, CoP 16 Doc. 53.2.2 (Rev. 1) (2013), *available at* http://www.cites.org/sites/default/files/eng/cop/16/doc/E-CoP16-53-02-02.pdf (last visited Jan. 19, 2015). [hereinafter "Milliken et al., *ETIS Report of TRAFFIC*"].

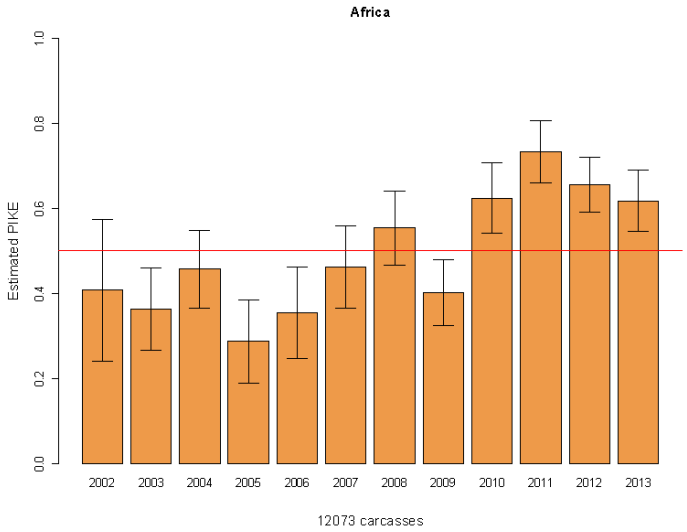


Figure 32: PIKE trends in Africa with 95 % confidence intervals. PIKE levels above the horizontal line at 0.5 (i.e. where half of dead elephants found are deemed to have been illegally killed) are likely to be unsustainable.[288]

The Monitoring the Illegal Killing of Elephants (MIKE) Central Coordination Unit of the CITES Secretariat confirms that "overall higher PIKE levels are apparent in all four African subregions in the second half of the period covered by MIKE monitoring (2008-2013)."[289]

Notably, the U.S. has one of the most significant markets for ivory in the world.[290] It has been estimated that one-third of ivory offered for sale in the U.S. was carved after 1989, indicating that the ivory was most likely illegally imported after the CITES Appendix I listing. See the discussion under the section titled *United States and the illegal trade in African elephant parts* for more information.

ii. Poaching for the illegal ivory trade is not biologically sustainable

The legal trade in African elephants and their parts has had a substantial negative impact on the population of this species, and the combined poaching and illegal trade has brought this species to the brink of extinction. The best available science clearly shows that the "current offtake exceeds the intrinsic growth capacity of the species."[291]

In 1978, the Department of Interior listed African elephants as "Threatened" recognizing that "elephants were exterminated in large parts of their range by ivory hunters and pressure from growing human populations."[292] At that time, there were "at least 1.3 million of these animals still in existence,"[293] more than double the present day population estimate of 433,999 to 683,888 African elephants. Even more striking is that the population was estimated to be ten million in

[288] CITES, *Elephant Conservation.*
[289] CITES, *Elephant Conservation.*
[290] Stiles & Martin, *U.S.A.'s Ivory Markets* at 71.
[291] Wittemyer et al., *Illegal Killing*.
[292] 43 Fed. Reg.F. 20499-20504 (1978).
[293] 43 Fed. Reg. 20499-20504.

1930.[294] Even in 1978, the USFWS recognized that, with respect to ivory, "legal sales may stimulate poaching, and it may be impossible to determine how a particular product was obtained."[295] There is now a well-established link between the two recent CITES-approved sales of ivory, an increase in demand for ivory, and the subsequent catastrophic spike in poaching rates to meet that increased demand (as discussed below).

In its 1978 listing, the USFWS supported continued interstate commerce in ivory as well as importation of ivory. The reasoning offered by the USFWS was as follows:

> Nevertheless, it may not be advisable to completely stop commerce or, insofar as can be accomplished by the Service, importation into the United States. Substantial amounts of ivory are collected from elephants that die of natural causes or are killed legally to protect human life or property. A limited number of elephants can be killed each year, and their ivory used, without detriment to overall populations. The sale of such ivory could result in extra funds for conservation programs, or at least could provide an economic incentive for such programs.[296]

Similar logic was used to justify the CITES-approved legal sale of ivory, with CITES requiring that the countries selling the ivory "are obliged to use the funds raised exclusively for elephant conservation and community development programmes within or adjacent to the elephant range."[297] However, instead of yielding conservation benefits, this pay-to-play scheme leads to a catastrophic increase in ivory demand and poaching that has put the species on the brink of extinction.[298]

Indeed, the USFWS has recently recognized the need to further restrict international and domestic trade in elephant parts and products[299] stating that "[g]iven the unparalleled and escalating threats to African elephants, we believe that a nearly complete ban on commercial elephant ivory trade is the best way to ensure that U.S. domestic markets do not contribute to the decline of this species in the wild."[300]

Increased consumer demand in the last decade has pushed ivory wholesale prices from $5/kg in

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[294] IUCN, *Elephant Database* ; E/The Envtl. Mag., *Are Elephant Populations Stable These Days?* Sci. Am. (Apr. 9, 2009) (available at http://www.scientificamerican.com/article.cfm?id=are-elephant-populations-stable [http://perma.cc/0zbziWRC2Hm].
[295] 43 C.F.R. 20499-20504, 20500 (1978).
[296] 43 C.F.R. 20499-20504 (1978).
[297] CITES, *Ivory Auctions Raise 15 Million U.S.D.*
[298] This point is addressed in the section of this petition titled "Legal commercial trade and increased demand for ivory." Following 1997, China emerged as the most important destination for "ivory that has been seized and reported to ETIS." Milliken et al., *Illegal Trade in Ivory*.2002.2002. Moreover, another ETIS report from 2013 revealed that there was "a progressively sharper and statistically significant increase in illicit ivory trade from 2008 onwards." Milliken et al., *ETIS Report of TRAFFIC*.2013.2013. Elephant poaching has been at an all-time high with nearly 100,000 poached between 2010 and 2012. Wittemyer et al., *Illegal Killing*.
[299] *USFWS Moves to Ban Commercial Elephant Ivory Trade Questions & Answers* (2014), https://www.fws.gov/international/travel-and-trade/ivory-ban-questions-and-answers.html (last visited Nov. 4, 2014). [hereinafter "*USFWS Moves to Ban Commercial Elephant Ivory*"].
[300] *USFWS Moves to Ban Commercial Elephant Ivory*.

1989 to $2,100/kg in 2014 in China. This skyrocketing value has incentivized poaching in Africa (often by actors with strong ties to organized crime and militant groups); current poaching rates stand at 5-7% of the African elephant population each year.[301] According to Vira et al. (2014), "[t]he volume of illegal trade is estimated to have tripled between 1998-2011 and is increasing at an escalating rate: activity more than doubled between 2007 and 2011."[302]

Analyses show a clear trend of escalating elephant deaths and dwindling populations. The IUCN estimates that in 2012 alone, at least 22,000 elephants were killed illegally[303] and yielded approximately $552 million in sale value.[304] In one stark example, researchers estimated that the population of forest elephants alone decreased by 62% between 2002 and 2011.[305] A more recent report by Wittemyer et al. (2014) estimated that poachers killed 33,630 elephants per year over the period 2010-2012,[306] and found that "elephant populations currently decline by nearly 60 to 70 percent every 10 years, making it likely for the species to go extinct in the near future."[307]

Because the range of the African elephants is vast and usually very remote, the bodies of poached elephants sometimes remain undiscovered. This indicates that the actual rate of poaching is likely to be much higher than estimated. Based on ivory seizure reports, 41.5 tons of ivory were confiscated in 2013 and with an interdiction rate of 10%,[308] meaning that only about 10% of illegally traded ivory is caught, "the true amount of trafficked ivory in 2013 was closer to 400 tons, or roughly 50,000[309] elephants."[310]

The following map (Figure 33) provides a visual illustration of the areas throughout Africa that have experienced the greatest poaching rates relative to the African elephant range:

[301] Vira et al., *Out of Africa*., at 3 *Out of Africa*, at 3.
[302] Vira et al., *Out of Africa* at 10. Report cites to CITES, *Elephant Conservation*.
[303] CITES, *Status of African Elephant Populations*.
[304] C4ADS estimate Using 2 tusks/elephant, 4kg/tusk and $3000/kg. Maisels et al., *Devestating Decline*.
[305] Maisels et al., *Devestating Decline*.
[306] Wittemyer et al., *Illegal Killing*.
[307] Wittemyer et al., *Illegal Killing*.
[308] The rule called "1-in-10" is also likely to be very conservative. It is usually used in Western law enforcement in application to other types of contraband like narcotics. In the case of ivory, it is transported through African and Asian ports that are known for poor port security and lacking screenings, and for insufficient penalties for wildlife crime. Ivory's Curse, at 5.
[309] C4ADS estimate Using 2 tusks/elephant, 4kg/tusk and $3000/kg.
[310] C4ADS estimate Using 2 tusks/elephant, 4kg/tusk and $3000/kg.

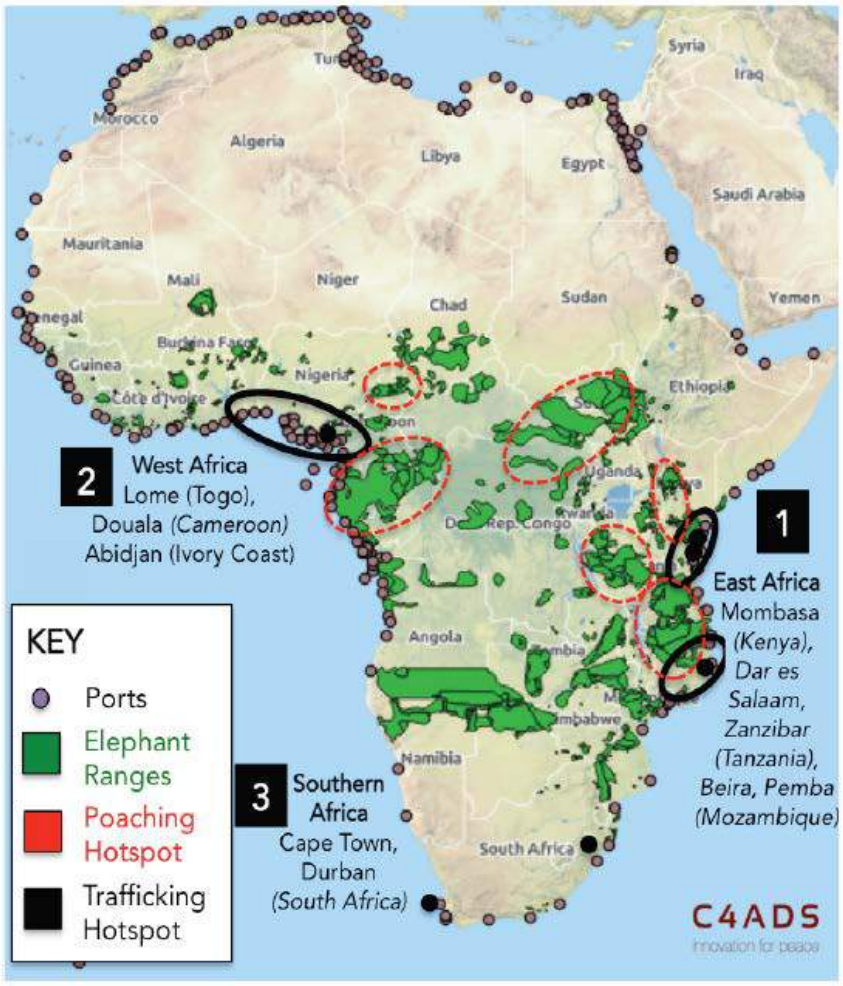

Figure 33: Major African Elephant Poaching Hotspots

Source: Varun Vira, Thomas Ewing, and Jackson Miller, *Out of Africa: Mapping the Global Trade in Illicit Elephant Ivory*, 2014 1-59 (2014).

a. West Africa

Data on poaching levels in West Africa is deficient due to a paucity of reliable information on the small and fragmented populations in that region (the smallest of all other sub regions) making it difficult to assess trends based on PIKE data.[311] Despite these limitations, it appears that poaching is increasing and levels "warrant concern."[312] As Figure 34 below illustrates, the proportion of illegally killed elephants (PIKE) to the total of carcasses found in West Africa has exceeded the 50% threshold for all but one of the last seven years, which is 2010. This means that over half the dead elephants were illegally killed in 2007, 2008, 2009, 2011, 2012 and 2013. This rate is highly likely to be unsustainable.[313]

[311] UNEP et al., *A Rapid Response*, at 35.
[312] UNEP et al., *A Rapid Response* at 35.
[313] CITES, *Elephant Conservation* at 19.

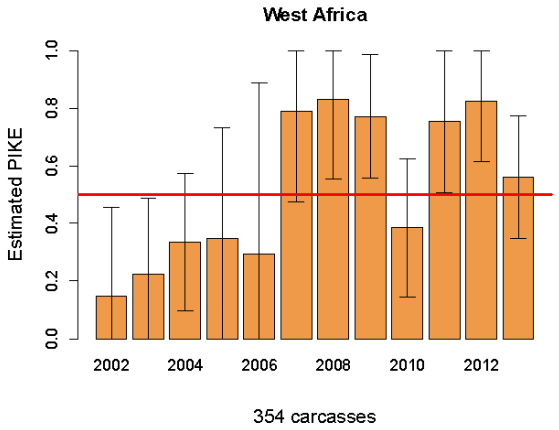

Figure 34: West Africa PIKE trends with 95 % confidence intervals. The number of carcasses on which the graphs are based is shown at the bottom of the graph.[314]

The level of concern as especially high because "populations in West Africa are particularly vulnerable to increases in poaching, which can severely distort sex ratios and lead to local extinctions."[315] Populations of fewer than 200 animals have been observed to disappear in just a few decades. One recent example is the Comoé National Park in Côte d'Ivoire where the increased rates of poaching, which have coincided with Côte d'Ivoire's civil war, have brought the country's African elephant population to the brink of extinction.[316]

b. Central Africa

The highest overall African elephant poaching levels are in Central Africa.[317] As Figure 35 below illustrates, the proportion of illegally killed elephants (PIKE) to the total of carcasses found in Central Africa has exceeded the 50% threshold for all but three of the twelve years assessed. This means that over half the dead elephants were illegally killed in 2003, 2004, 2007, 2008, 2009, 2010, 2011, 2012, and 2013. This rate is highly likely to be unsustainable.[318]

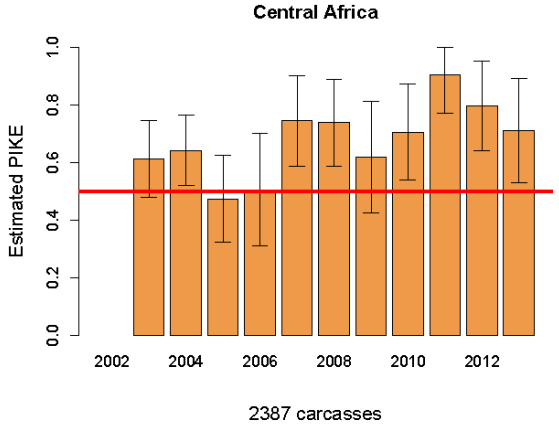

Figure 35: Central Africa PIKE trends with 95 % confidence intervals. The number of

[314] CITES, *Elephant Conservation* at 19.
[315] UNEP et al., *A Rapid Response* at 36.
[316] UNEP et al., *A Rapid Response* at 36.
[317] CITES, *Elephant Conservation.*
[318] CITES, *Elephant Conservation* at 19.

carcasses on which the graphs are based is shown at the bottom of the graph.[319]

In many places in Central Africa poaching is the lone observable cause of elephant deaths. According to Vira and Ewing (2014), "by 2011, 5 out of 15 recorded sites in Central Africa were registering a 100% PIKE rate, meaning every single elephant found dead had been illegally poached; at another four sites, the PIKE rate was higher than 87%."[320] Although African elephant numbers in Central Africa may have once numbered over a million, only around 50,000 (or 5% of the historic peak) remain, mostly in Gabon and the Republic of Congo.[321] With so few elephants left to kill, poaching rates appear to be leveling off, with that activity displacing to elsewhere on the continent.[322]

In Chad and the Democratic Republic of Congo, there are serious concerns regarding continued armed conflict, absent rule of law, and lack of accountability for those who engage in ivory trafficking, especially for those who occupy high positions in government. This creates an environment in which African elephants are extremely vulnerable and threatened with possible extinction.[323] In Chad, although Zakouma National Park is relatively difficult for poachers to penetrate, well-armed gangs (some with ties to the Sudanese Janjaweed militias) still focus attention on park boundaries and outlying areas.[324] The Republic of Congo has "a heavy and expanding extractive and logging industry in an environment of poverty and corruption" which means that their elephants "are prime targets, now that most other Central African ranges are nearly barren."[325]

c. Southern Africa

Namibia, Botswana, and South Africa "consistently score the lowest in terms of elephant poaching risk…"[326] As Figure 36 below illustrates, the proportion of illegally killed elephants (PIKE) to the total of carcasses found in Southern Africa has not yet exceeded the 50% threshold, which means the number of illegally killed elephants has remained at less than half the total.[327]

[319] UNEP et al., *A Rapid Response*.
[320] Ivory's Curse, at 6.
[321] Ivory's Curse, at 6.
[322] Ivory's Curse, at 7.
[323] Ivory's Curse, at 99.
[324] Ivory's Curse, at 99.
[325] Ivory's Curse, at 100.
[326] Ivory's Curse, at 100.
[327] CITES, *Elephant Conservation* at 19.

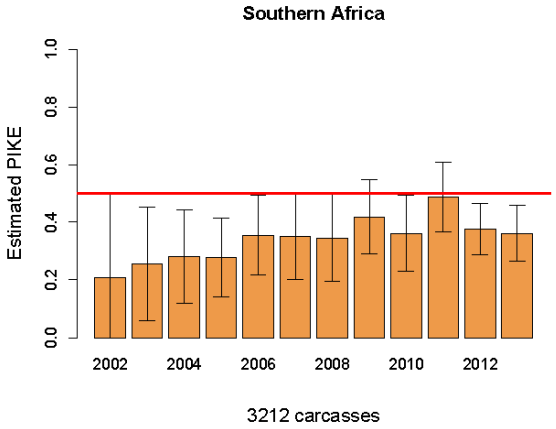

Figure 36: Southern Africa PIKE trends with 95 % confidence intervals. The number of carcasses on which the graphs are based is shown at the bottom of the graph.[328]

However, these low rates are "only relative"[329] according to Vira and Ewing (2014) because "[s]yndicates in the region appear to be targeting the higher-value rhino, but are becoming increasingly successful and coordinated."[330] Although it is primarily rhinoceros that are currently threatened by poaching in this region, the elements are in place for potential poaching increases in the future: elephants in the region are numerous and less protected than rhinos, with Botswana's population, for example, residing in a vast area that is difficult to monitor and police.

Mozambique's "last 20,000 or so elephants are in grave danger of extinction in the near term" due partly to the fact that most of Mozambique's elephants live close to the poorest and most vulnerable Mozambican communities, in unprotected habitat such as Niassa Reserve, where more than 8,000 elephants were poached between 2009-2012.[331]

With respect to Zimbabwe and Zambia, both countries are experiencing increased poaching. In the case of Zimbabwe, for example, 300 elephants were poisoned with cyanide in October of 2013.[332] Zambia is undeveloped and has low income levels, which incentivizes elephant poaching especially with the rising price for ivory.[333] On the other hand, gangs in Zambia have been documented to cross the border into Zimbabwe much more frequently, which may mean that poaching levels in Zimbabwe are probably higher than in Zambia.[334]

Finally, today "as few as 1,000 elephants live in Angola, down from estimates as high as 200,000 in the 1970s."[335]

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[328] CITES, *Elephant Conservation* at 19.
[329] Ivory's Curse, at 100.
[330] CITES, *Elephant Conservation* at 100.
[331] CITES, *Elephant Conservation* at 7.
[332] Joe Decapua, Voice of America, *Cyanide Kills Elephants, Ecosystem* (Nov. 1, 2013), *available at* http://www.voanews.com/content/elephants-cyanide-1nov13/1781504.html (last visited January 27, 2015) [hereinafter "Decapua, *Cyanide Kills Elephants*"].
[333] Decapua, *Cyanide Kills Elephants*.
[334] Decapua, *Cyanide Kills Elephants*.
[335] Decapua, *Cyanide Kills Elephant* at 8.

d. East Africa

UNEP asserts that Central Africa's dwindling elephant populations have led poachers to shift their efforts elsewhere, particularly to East Africa with that region's larger elephant numbers.[336] As Figure 37 below illustrates, the proportion of illegally killed elephants (PIKE) to the total of carcasses found in Eastern Africa has exceeded the 50% threshold for 2011 and 2012, and was right on the line of 0.5 for 2013. This rate is highly likely to be unsustainable.[337]

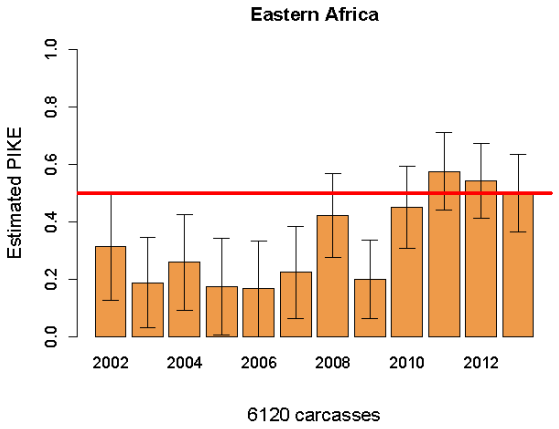

Figure 37: East Africa PIKE trends with 95 % confidence intervals. The number of carcasses on which the graphs are based is shown at the bottom of the graph.[338]

Tanzania, for example, has had an estimated 25,000 elephants poached in the Selous ecosystem between 2009 and 2013, which represents 66% of the country's population.[339] Kenya has also reported high levels of poaching, with poaching responsible for two-thirds of the elephant carcasses at monitored sites in 2011.[340] Both Kenya and Tanzania have most of the elements required to be "self-contained poaching and trafficking systems (in addition to transshipping ivory from other regions), with large elephant reserves, modern economies, and major ports implicated in regional trafficking."[341] According to ETIS, these two countries accounted for over half (16 out of 34) of the largest ivory seizures from 2009-2011.[342] In another East African example, South Sudan, the resurgence of civil war has relegated natural resource protection to an afterthought, with serious consequences for that country's elephants. [343]

iii. Ivory Trafficking and Global ETIS Seizure Data

The sections that follow address seizure rates recorded and analyzed by TRAFFIC's Elephant Trade Information System (ETIS) and also recorded by the CITES Trade Database. Seizures are

[336] Ivory's Curse, at 7.
[337] CITES, *Elephant Conservation* at 19.
[338] CITES, *Elephant Conservation* at 19.
[339] Ivory's Curse, at 7.
[340] UNEP et al., *A Rapid Response*, at 36.
[341] Ivory's Curse, at 99.
[342] UNEP et al., *A Rapid Response*. at 45.
[343] UNEP et al., *A Rapid Response* at 99.

an important indicator of illegal trade activity, but represent only a small fraction of actual illegal trade.

The scale of some of the most recent seizures illustrates the scope of the ivory trafficking problem. Nearly 40 tons of ivory were seized in 2011.[344] It is estimated that 41.5 total tons were seized in 2013 which according to a senior TRAFFIC official "is the largest volume of large-scale seizures we have seen in the past 25 years…"[345] The following are a sampling of some of the largest seizures to date: Six tons of ivory were confiscated in Malaysia in December of 2012, representing one of the biggest seizures of all time;[346] Four and a half tons were seized in one week in Kenya in July of 2013;[347] Similarly in October of 2013, a major seizure took place again in Kenya totaling four tons.[348]

ETIS is the largest database of elephant product seizure information from 1989 until the present. According to TRAFFIC's Tom Milliken (2014) "2011, 2012 and 2013 represent the three years in which the highest quantity of ivory was seized and reported to ETIS over the last 25 years."[349] Figure 38 below demonstrates the weight and number of seizures between 1989 and 2013. A significant increase in weight and number of seizures followed the 2008/2009 CITES permitted one-off sale of ivory.

[344] Milliken T. et. al, *The Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory: A Report to the 16th Meeting of the Conference of the Parties to CITES* 4 (TRAFFIC Intl. 2013) (available at http://www.cites.org/eng/cop/16/doc/E-CoP16-53-02-02.pdf [http://perma.cc/0Yom7yJZTnP] (last visited Nov. 4, 2014)).

[345] Andy Coghlan, Record ivory seizures point to trafficking rise, NewScientist (3, Dec. 2013), *available at* http://www.newscientist.com/article/dn24692-record-ivory-seizures-point-to-trafficking-rise.html.

[346] TRAFFIC, *Massive African Ivory Seizure in Malaysia*, http://www.traffic.org/home/2012/12/11/massive-african-ivory-seizure-in-malaysia.html [http://perma.cc/08nYoo48ZSp] (Dec. 11, 2012) (last visited Nov. 4, 2014).

[347] Associated Press, *Kenyan Officials Seize Ivory Disguised as Peanuts*, http://news.yahoo.com/kenyan-officials-seize-ivory-disguised-peanuts-142215226.html [http://perma.cc/0pbjHPiTPZ6] (July 9, 2013) (last visited Nov. 4, 2014)

[348] Agence France-Presse, *Kenya Seizes Ivory as Elephant Slaughter Surges*, http://uk.news.yahoo.com/kenya-seizes-ivory-elephant-slaughter-surges-081447625.html [http://perma.cc/0bjQiTpE1t6] (Oct. 9, 2013) (last visited Nov. 4, 2014).

[349] Tom Milliken, *Illegal Trade in Ivory and Rhino Horn: An Assessment Report to Improve Law Enforcement Under the Wildlife TRAPS Project*, 1-30 (2014), available at http://www.traffic.org/storage/W-TRAPS-Elephant-Rhino-report.pdf (last visited Nov. 4, 2014). [hereinafter "Milliken, *Illegal Trade in Ivory and Rhino Horn*"].

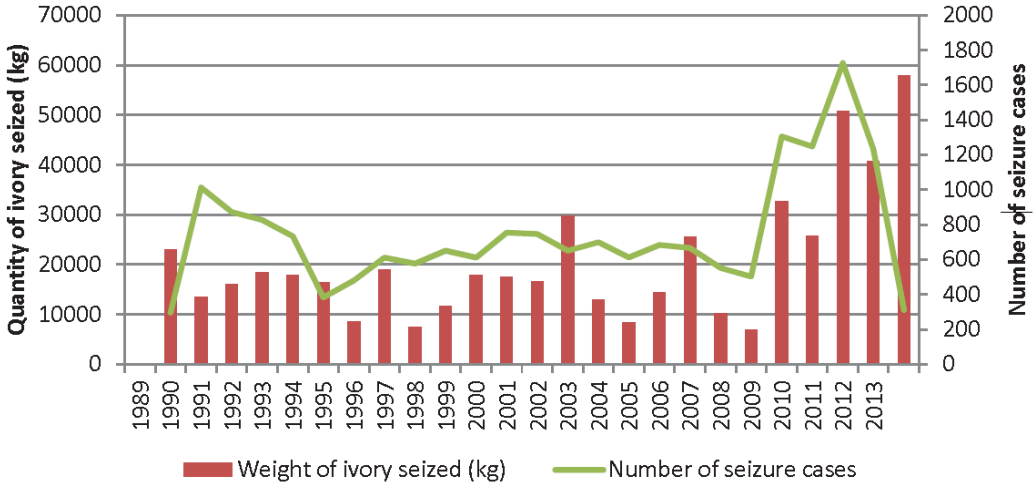

Figure 38: Estimated weight of ivory and number of seizure cases by year, 1989 - 2013

Source: CITES, Elephant Conservation, Illegal Killing, and Ivory Trade, SC65 Doc. 42.1 (Jul 2014), pg. 26.

ETIS places a special emphasis on tracking large seizures of over 500 kilograms in weight. These seizures "represent a kind of 'early warning' indicator of the illicit ivory trade as a whole" and "such seizures are also indicative of the presence of organized crime in the illicit ivory trade."[350] Transnational syndicates are behind these large shipments (considering the complexity of logistics – everything from the bribes required to pass them through each port of egress and entry, to consolidation of hundreds or thousands of items into a single crate, and more) and it is understood that they are predominantly "Asian-run, Africa-based operations."[351] The criminal nature of this illicit trade threatens global security, safety and stability of local communities, and certainly the survival of African elephants. According to sources, "Al Qaeda-affiliated al-Shabab in Somalia, Joseph Kony's Lord's Resistance Army in central Africa and Boko Haram in Nigeria are among the militants making money from trafficking ivory tusks from slaughtered elephants to pay their fighters and buy arms and ammunition,"[352] although each of these groups participates in the illegal trade to a different extent, and more information is needed to determine the scope of involvement.

Prior to 2009, on average between five and seven large-scale seizures took place each year.[353] However, after 2009 the average jumped to 15 and as many as 21 seizures weighing over 500 kilograms.[354] In 2013, 18 seizures were made, which is the "the greatest quantity of ivory derived from large-scale seizure events going back to 1989."[355] This 2013 data is distressing because it indicates that the rate of ivory trafficking continues to grow. As Figure 39 below demonstrates, a significant increase in large-scale seizures followed the 2008/2009 CITES permitted one-off sale of ivory. Some of the increase may also be the result of an improvement in enforcement and therefore increase in the number of seizures.

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[350] Milliken, *Illegal Trade in Ivory and Rhino Horn* at 5.
[351] Milliken, *Illegal Trade in Ivory and Rhino Horn* at 5.
[352] Sen, Ashish Kumar, *Terrorists slaughter African elephants, use ivory to finance operations* (13 Nov. 2013), *available at* http://www.washingtontimes.com/news/2013/nov/13/terrorists-slaughter-african-elephants-use-ivory-t/?page=all (last visited 5 Dec. 2014) [hereinafter "Kumar, *Terrorists slaughter African elephants*"].
[353] Kumar, *Terrorists slaughter African elephants.*
[354] Kumar, *Terrorists slaughter African elephants.*
[355] Kumar, *Terrorists slaughter African elephants.*

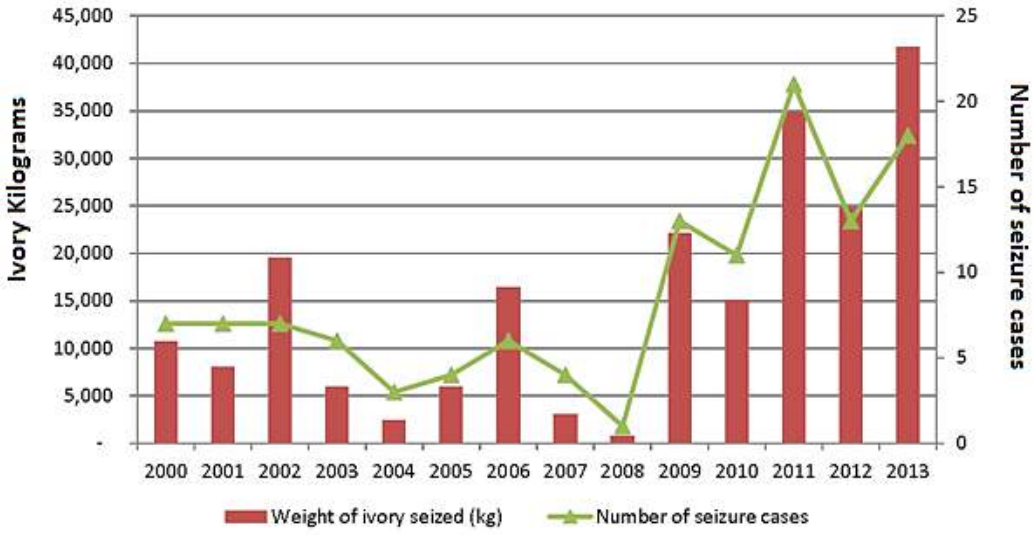

Figure 39: Estimated weight and number of large-scale (>500 kg) ivory seizures by year, 2000 - 2013 (ETIS 09 January 2014)[356]

Source: Milliken, T. (2014). Illegal Trade in Ivory and Rhino Horn: an Assessment Report to Improve Law Enforcement under the Wildlife TRAPS project. pg. 6.USAID and TRAFFIC.

With respect to the location of these seizures, "of the 76 large-scale ivory seizures made and reported to ETIS since 2009, two-thirds have occurred in countries and territories in Asia whilst in transit or during illegal import, and only one-third were seized in Africa prior to exportation."[357] However, since 2013 the seizures in Africa have exceeded those in Asia.[358]

iv. United States and the illegal trade in African elephant parts

a. Seizures

In a 2007 report presented by TRAFFIC at CITES COP 14 it was explained that "[t]he United States continues to rank highest in terms of number of seizures"[359] and the U.S. "continues to make a large number of rather small ivory seizures, which is indicative of a country largely dealing with the illegal import of ivory products as personal possessions."[360] At the same time TRAFFIC noted that "the 'mean weight' value [of U.S. seizures] is comparatively much larger than that of Group 11 (Australia and Switzerland), countries which otherwise share similar values and trade dynamics, suggesting that at least some part of the ivory traffic to the United States involves larger-scale shipments of either raw or worked ivory products that may be commercial in

[356] Milliken, *Illegal Trade in Ivory and Rhino Horn*, at 6.
[357] Milliken, *Illegal Trade in Ivory and Rhino Horn*, at 7.
[358] Milliken, *Illegal Trade in Ivory and Rhino Horn* at 7.
[359] CITES, *Monitoring of Illegal Trade in Ivory and Other Elephant Specimens*, 2007 CITESCoP14 Doc. 53.2(2007), http://www.cites.org/eng/cop/14/doc/E14-53-2.pdf (last visited Nov. 7, 2014).
[360] T. Milliken, R. W. Burn and L. Sangalakula, *The Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory: A report to the 14th meeting of the Conference of the Parties to CITES*, CoP14 Doc. 53.2, Annex 1 (2007).

nature."[361]

In a Milliken et al. (2013) report to CITES COP 16, the U.S. was addressed in a group with Australia and Germany because all three countries regularly report ivory trade seizures. TRAFFIC revealed that "[w]ithin this group, ivory trade activity has only marginally dropped in the most recent period with 45% of the total trade by weight from 2006 occurring over the last three years."[362] Apart from trafficked ivory that is actually seized, Stiles and Martin (2008) report that "individuals probably smuggle in a significant quantity as personal effects, while other pieces enter by post and courier in mislabelled packages and occasionally by sea."[363]

The Stiles and Martin analysis also reviewed illegal imports between 1995 and 2007, as documented by the U.S. Law Enforcement Management Information System (LEMIS). Another analysis completed by the International Fund for Animal Welfare (IFAW) assessed the U.S. seizures of African elephant products between 2009 and 2012. IFAW reviewed LEMIS border seizures as well as USFWS investigations and special operations. This section presents the details of these findings.

Table 43: Ivory Imports Seized in the U.S. from 1992 and 2007, as well as 2009 and 2012, relative to Global ETIS Seizures

	Stiles & Martin[364] (1992 to 2007)	**IFAW[365] (2009 to 2012)**	**Global Seizures (ETIS) (2009-2012)[366]**
Seized Ivory Imports	8,852 specimens (avg. 553/year)	918 specimens (avg. 230/year)	2009: ~7,000kg 2010: ~32,000kg 2011: ~26,000kg 2012: ~51,000kg
	15.2 kg recorded* (avg. 0.95kg/year)	14 kg recorded* (avg. 3.5kg/year)	
Exporters of Illegal Ivory to U.S.	UK (80%), France (4%), Canada (3%)	UK, Nigeria, South Africa, Zimbabwe, and Japan	N/A
* Customs logbook entries sometimes note only with the weight of seized ivory items, rather than number of specimens. The weighted seizures in this table should be considered as *additional* to the number of specimens.			

The table below provides details of the IFAW analysis on the main countries of origin and export:

[361] T. Milliken et al., *The Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory: A Report to the 14th Meeting of the Conference of the Parties to CITES*, Apr. 15, 2007 at, http://awsassets.panda.org/downloads/etis_report_cop14_doc__53_2_annex_1_final1.doc (last visited Nov. 7, 2014).
[362] T. Milliken et al., *ETIS Report of TRAFFIC*T.
[363] Stiles & Martin, *U.S.A.'s Ivory Markets* at 71.
[364] Stiles & Martin, *U.S.A.'s Ivory Markets* at 71.
[365] The analysis presented is based on data IFAW acquired on ivory trade in the U.S. from the USFWS's Law Enforcement Management Information System (LEMIS) in response to IFAW's December 2012 and February 2013 Freedom of Information Act (FOIA), 5 U.S.C. § 552, requests. USFWS, *Response to IFAW FOIA Requests, LEMIS Data* (Mar. 2013) [hereinafter "USFWS, *Response to IFAW FOIA Requests*"]. The analyses of U.S. ivory imports and exports presented in this Article are based on an internal IFAW report initially analyzing and interpreting the data. USFWS staff reviewed the IFAW report and provided feedback on the analyses.
[366] Milliken, *Illegal Trade in Ivory and Rhino Horn* at 2. Please note that these are rough approximations from a chart that did not include exact figures for ETIS-calculated global seizures.

Table 44: Main Countries of Origin and Export of U.S. Seized Ivory Imports from 2009-2012.

Ivory Type	Main Countries of Origin (by import entries)	Main Countries of Export (by import entries)
Ivory Carvings	Unknown; South Africa; Nigeria; Zimbabwe; Thailand; Cambodia; Cameroon; Vietnam; Canada; Central African Republic; U.K.; Ireland; Namibia; Zambia	U.K.; Japan; South Africa; Nigeria; France; Canada; Zimbabwe; China; Uruguay; Vietnam; Unknown; Australia; Cambodia; Germany; Ireland; Philippines; Belgium; Denmark; Greece; Indonesia; Mozambique; Netherlands; Portugal; United Arab Emirates; Burundi; Bolivia; Brazil; Cameroon; Egypt; Georgia; Hong Kong; Haiti; Israel; Italy; Kuwait; Malaysia; New Zealand; Panama; Peru; Saudi Arabia; South Korea; Syria
Ivory Jewelry	Unknown; South Africa; Zimbabwe; Nigeria; Thailand; Cameroon; Vietnam; Ghana; Namibia; Sudan; Zambia	Vietnam; South Africa; Nigeria; Zimbabwe; Thailand; Cameroon; Unknown; Ghana; Japan; Lebanon; South Korea; Eritrea; Germany; Honduras; Hong Kong; India; Italy; Namibia; Netherlands; New Zealand; Peru; U.K.
Tusks	Zimbabwe; Unknown; Nigeria; Namibia; Botswana; Central African Republic; Democratic Republic of the Congo; Kenya; Tanzania	Nigeria; Zimbabwe; Namibia; Belgium; Botswana; France; U.K.; Bahamas; Ghana; Greece; South Africa; Tanzania; Thailand; Venezuela
Ivory Pieces	Unknown; Congo; Laos; South Africa; Zambia	U.K.; Belgium; France; Japan; Laos; Morocco; New Zealand; South Africa
Trophies	Zimbabwe; Botswana; Tanzania	Zimbabwe; Botswana; South Africa; Tanzania
Ivory Piano Keys	Unknown	U.K.

While U.S. seizures of ivory are a small fraction of the global seizures recorded by ETIS, since most seizures are small-scale, seizures represent only a fraction of the actual illegal trade moving through the U.S. (Interpol estimates that 90% of illegal shipments are not interdicted by law enforcement).[367] The IFAW analysis reveals that "highlights from some USFWS investigations and special operations related to ivory from 2008 up to and including 2012 indicate that the ivory market in the U.S. involves sophisticated schemes including operatives and partners in the black market ivory trade from multiple countries."[368] Ivory investigations between 2008 and 2012 "involved defendants, in at least ten states, in relation to at least a dozen shipments"[369] and "[i]n one case in 2011, USFWS investigators seized one ton of elephant ivory from an individual," while "[a] single investigation in New York confiscated $2 million worth of ivory objects."[370] [371]

[367] Allgood et al., U.S. *Ivory Trade* at 56.
[368] Allgood et al., U.S. *Ivory Trade* at 31.
[369] Allgood et al., U.S. *Ivory Trade* at 57.
[370] David M. Halbfinger, *2 Manhattan Jewelers Admit Illegal Ivory Trading*, N.Y. Times (July 12, 2012) (available at

The CITES Trade Database also reveals additional specifics on the seizures that took place between 2003 and 2012. If looking at trophies, tusks, ivory carvings, and ivory pieces, in each of these categories there is a clear pattern of overall increase in the number of U.S. seizures after the CITES one-off sale in 2008/2009, except for ivory pieces. Moreover, there appears to be a drop in the number of seizures in 2012, but that does not necessarily indicate a trend. *See* Figures 40-43.

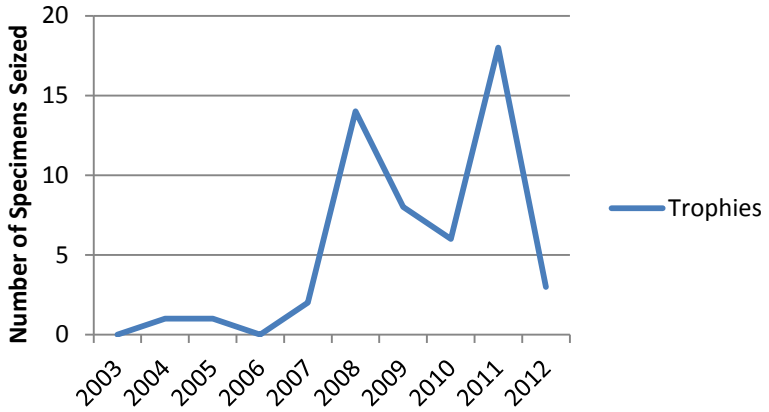

Figure 40: CITES Trade Database Reported U.S. Seizures of African Elephant Trophies between 2003 and 2012, No Units

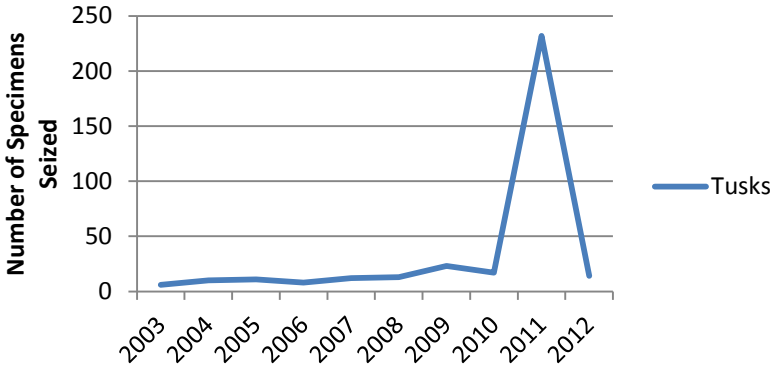

Figure 41: CITES Trade Database Reported U.S. Seizures of African Elephant Tusks between 2003 and 2012, No Units

http://www.nytimes.com/2012/07/13/nyregion/illegalivory- leads-2-to-plead-guilty-in-new-york.html [http://perma.cc/0MunQsSFSgx] (accessed Nov. 17, 2013)).

[371] USFWS, *Response to IFAW FOIA Requests*, at 57.

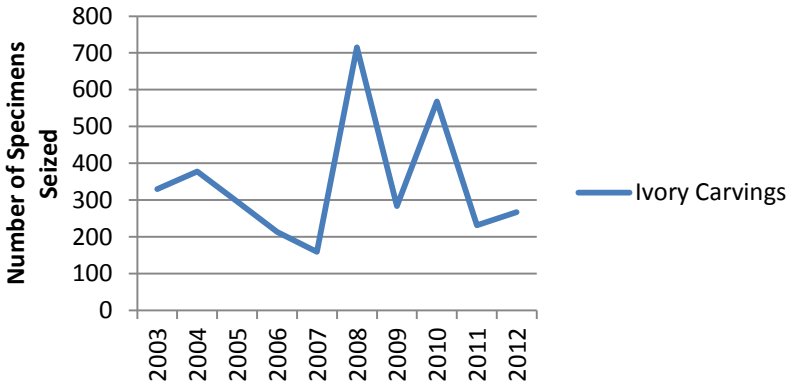

Figure 42: CITES Trade Database Reported U.S. Seizures of African Elephant Ivory Carvings between 2003 and 2012, No Units

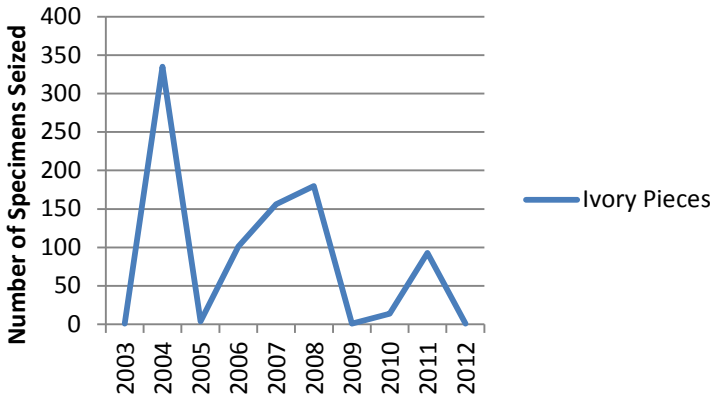

Figure 43: CITES Trade Database Reported U.S. Seizures of African Elephant Ivory Pieces between 2003 and 2012, No Units

v. Conclusion: the African elephant is endangered by overutilization for commercial and recreational purposes

The African elephant is clearly overutilized for commercial and recreational purposes. There are two components to this imminent threat to the species' survival: trade that is already illegal and trade that is currently legal. As documented in this Petition, substantial legal trade in ivory has stimulated demand for ivory that outpaces the legal supply. This has led to catastrophic levels of poaching that are not biologically sustainable. The lack of restrictions on domestic trade in ivory and elephant products in the U.S. has plays a role in the overutilization of wild elephants, as illegally-obtained ivory is frequently sold under the guise of being antique.[372] The frequency of federal law enforcement seizures of shipments of ivory directly from Africa further prove that the U.S. market drives unsustainable poaching and trafficking of elephants, which has greatly exacerbated in the last 5 years.[373, 374]

[373] Allgood et al.,IFAW, U.S. *Ivory Trade*.
[374] CITES, *Elephant Conservation*.

C. Disease or predation

Elephants are susceptible to several infectious diseases including tuberculosis[375] and elephant pox (genus *Orthopox*);[376] musculoskeletal diseases such as arthritis;[377] and other ailments. While these can be harmful or fatal to individual animals, disease is not presently considered a major contributor to overall population declines, according to the IUCN's 2008 threat assessment.[378] This may change in the future as genetic diversity and habitat are reduced, and bears close monitoring.

Likewise, natural predation is not currently a major factor in elephant population declines, according to IUCN. As a large animal with strong defensive herd instincts, most African predators avoid attacks on elephants as a matter of course, though crocodiles and lions have been known to predate juveniles and sick or injured adult elephants.

[375] S. Mikota, *A Brief History of TB in Elephants.* http://www.aphis.usda.gov/animal_welfare/downloads/elephant/A%20Brief%20History%20of%20TB%20in%20Elephants.pdf Accessed Nov. 1, 2014.
[376] P. Phuangkum et al., Elephant Care Manual for Mahouts and Camp Managers (Food & Agric. Org. of the United Nations 2005), http://www.fao.org/3/a-ae943e/ae943e0c.htm. Accessed Nov. 1, 2014 [hereinafter "P. Phuangkuam et al., *Elephant Care Manual*"].
[377] P. Phuangkuam et al., *Elephant Care Manual*.
[378] IUCN Red List, Loxodonta Africana.

D. Inadequacy of existing regulatory mechanisms

The African elephant is the subject of a large and varied body of law – including local, national, and international laws – much of which is designed to protect the species through mechanisms such as trade controls and direct prohibitions on take. Collectively, these laws and regulations have failed to prevent the drastic population loss (detailed in Section II) that the African elephant has suffered in recent years. Thus, the species is in danger of extinction due to this listing factor.

a. International law and agreements

i. CITES

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a 181-nation, multilateral agreement designed to monitor and regulate international wildlife trade.[379] While other frameworks (such as the Convention on the Conservation of Migratory Species of Wild Animals and the Convention on Biological Diversity) could potentially be used for protecting elephants, at this time CITES is the primary international legal mechanism for this purpose. Under the CITES system, species are given various levels of protection based on which "Appendix" they are listed under: "Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances. Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival."[380] (Appendix III is not relevant to this uplisting petition.) Appendix I is generally more restrictive than Appendix II, that is, persons who wish to engage in international trade for Appendix I species must demonstrate that this transaction is not primarily commercial in nature *and* does not detrimentally impact species survival; while Appendix II species may be traded internationally for commercial purposes, if that action does not detrimentally impact species survival. Another factor is that international shippers of Appendix I species must obtain both import and export permits (after demonstrating compliance with applicable law) from the countries' Management Authorities; Appendix II species need only an export permit.[381]

African elephants are listed under both CITES Appendix I and Appendix II, depending on the country: currently, elephants from Botswana, Namibia, Zimbabwe, and South Africa are listed under Appendix II, while the rest of the continental population is designated Appendix I.[382] This "split-listing" came about as an outcome of the 7th Conference of the Parties (CoP) in 1989, when all populations were listed on Appendix I, and when CoP delegates adopted Resolution Conf. 7.9, which laid out the process for transferring populations from Appendix I to II based on the "status of elephant populations, the effectiveness of conservation measures, and the degree of control of the movement of ivory within and through the Parties."[383] At subsequent meetings, populations of four countries (South Africa, Botswana, Namibia and Zimbabwe) were transferred to Appendix II, resulting in the "split-listing" observed today. This differential treatment has had serious implications for trade and conservation: Botswana, Namibia, Zimbabwe, and South Africa have all

[379] CITES, What is CITES? http://www.cites.org/eng/disc/what.php. Accessed January 12, 2015.
[380] CITES, How CITES Works , http://www.cites.org/eng/disc/how.php. Accessed October 1, 2014
[381] CITES, The CITES Appendices. http://www.cites.org/eng/app/index.php . Accessed January 12, 2015.
[382] CITES, *African Elephant*.
[383] Allgood et al., *U.S. Ivory* Trade, at 36.

participated in CITES-sanctioned sales of stockpiled ivory since 1999 (the buyers were China and Japan), which is unlawful for Appendix I-listed elephants under CITES.

In the 1978 USFWS decision to list the African elephant as Threatened under the Endangered Species Act, the USFWS stated that CITES "provides a mechanism for controlling the export of the elephant, and so long as this mechanism is functioning properly, there is no call for the United States to set up more, or less restrictive measures."[384] However, the CITES system has significant limitations when it comes to protecting African elephants, including: (1) CITES protections are marked by inconsistent implementation and enforcement (2) CITES governs only international trade, not domestic markets;(3) CITES protections do not apply equally to all classes of wildlife products in international trade; (4) CITES does not adequately monitor African elephant populations, mortality, or product shipments; and (5) in the case of African elephants, CITES Parties have on two separate occasions undermined elephant conservation by sanctioning ivory stockpile sales. Therefore, the U.S. must now establish more restrictive trade measures through an Endangered listing. We will examine these issues one by one in the following sections.

1. Inconsistent implementation and enforcement

CITES is an international treaty and Parties make decisions based on diplomatic needs, not necessarily the biological needs of the species. Consequently, the politics of restricting trade in highly valuable species can overshadow the biological requirements for species conservation. CITES relies on individual countries to follow CITES rules and regulations, and there is little oversight by CITES of countries' implementation, compliance or enforcement. In specific instances, there is a review of certain matters (such as whether countries have laws to implement the Convention, or whether countries are making certain findings) but these are extremely limited in scope and rarely result in punitive measures.

Also related to this is the fact that, as has been established through the Review of Significant Trade process, many countries are not making proper findings under CITES guidelines that are required in order to issue export permits. As a result of this process, the CITES Secretariat has recommended that Parties not trade in CITES specimens with certain Parties that have been found not to be making proper non-detriment findings as required by the Convention. The U.S., too, has found through its own analysis that Zimbabwe and Tanzania are not adequately protecting elephants and has taken stricter domestic measures as allowed under Article XIV of the Convention to prohibit imports from those countries (as discussed further below). Thus, the U.S. has already recognized that there are problems with CITES implementation by African elephant range countries, and existing CITES regulations are not enough to protect the species.

Politics has been an overriding factor in CITES Appendix listing decisions. The fact that not all African elephant populations are Appendix I-listed is itself a reflection of CITES' weak and decentralized power structure. In 1989, at the height of that era's poaching crisis, there was a strong push by numerous member states to transfer the species from Appendix II to Appendix I.[385]

[384] 43 Fed. Reg. 20499, 20500 (May 12, 1978).
[385] E. Barbier, et al., Elephants, Economics and Ivory 131 (Routledge 2013) http://books.google.com/books?id=SWD7AQAAQBAJ&pg=PA132&lpg=PA132&dq=cites+somalia+amendment+ivory&source=bl&ots=RkqbrXvCfQ&sig=phUm_x0AuYuwiaTOSFtHBJrAoSI&hl=en&sa=X&ei=kqD8U_G4IsPjsASaxIKgDg&ved=0CB4Q6AEwAA#v=onepage&q=cites%20somalia%20amendment%20ivory&f=false.

However, CITES delegates debated numerous alternatives to an across-the-board Appendix I listing and ultimately settled on a process whereby the species was transferred to Appendix I, with a later mechanism by which range states could petition to transfer their elephant populations to Appendix II.[386] This settlement was driven by Southern African range states that wanted to capitalize on their stockpiled ivory and skins as well as future revenue from trophy hunting.[387]

CITES enshrines the right to dissent from a decision of the Parties to list a species in any Appendix in the "reservation" clause of the Convention: "Any Party (member State) of CITES may make a unilateral statement that it will not be bound by the provisions of the Convention relating to trade in a particular species listed in the Appendices (or in a part or derivative listed in Appendix III."[388] The reservation clause allowed numerous range states to officially exempt themselves from trade restrictions that resulted from the 1989 CITES decision to list the African elephant on Appendix I;[389] this gave those states an enormous amount of leverage in setting their own trade agenda in the years to come.

Recent CITES measures to address illegal ivory trade illustrate failures of compliance
In March of 2013 the CITES Parties required a group of eight nations (China, Kenya, Malaysia, Philippines, Thailand, Uganda, the United Republic of Tanzania and Viet Nam) to develop national ivory action plans (NIAPs) detailing their responses to the poaching crisis. In July 2014, at a meeting of the CITES Standing Committee, that group was expanded to include eleven other source, transit, and consumer nations: Angola, Cambodia, Cameroon, Congo, the Democratic Republic of the Congo, Egypt, Ethiopia, Gabon, the Lao PDR, Mozambique and Nigeria.[390] These countries were threatened with the possibility of trade sanctions if satisfactory NIAP's are not developed and implemented.

Although honest assessment of countries' noncompliance is a necessary step, it is far from evident that meaningful change will result from this action. Taking Thailand as one conspicuous example, the initial threat of sanctions was relatively unheeded, despite a public commitment by the Thai government to reform: "A week before the [July 2014 intercessional CITES] meeting, TRAFFIC released a report on Thailand's ivory market, which found the availability of ivory on sale in Bangkok had tripled in the year since the country pledged to eradicate its domestic ivory market."[391] Thailand failed to submit a plan as required, and the CITES Standing Committee responded by (once more) threatening to impose trade sanctions on Thailand, but gave that country an additional eight months to make progress on its NIAP before a CITES Standing Committee vote on such a restriction would occur. Preliminary reports indicate that Thailand's NIAP "is unlikely to satisfy the international community's requirements for urgent action on the country's illegal ivory trade."[392] According to an October 15, 2014 editorial in the Bangkok Post, "It is an

[386] R. Orenstein, Ivory, Horn and Blood 62 (Firefly Books Ltd. 2013) [hereinafter "Orenstein, *Ivory, Horn and Blood*"].
[387] Orenstein, *Ivory, Horn and Blood* AT 78-84
[388] CITES, RESERVATIONS, http://www.cites.org/eng/app/reserve_intro.php. Accessed October 1, 2014
[389] Orenstein, *Ivory, Horn and Blood*, at 63.
[390] CITES, Reservations, http://www.cites.org/eng/app/reserve_intro.php. Accessed October 1, 2014.
[391] TRAFFIC, Thailand Must Address Illegal Ivory Trade or Could Face Sanctions: CITES (2014), http://www.traffic.org/home/2014/7/25/thailand-must-address-illegal-ivory-trade-or-could-face-sanc.html [hereinafter "TRAFFIC, *Thailand Must Address Illegal Ivory Trade*"].
[392] WWF, Thailand in the Spotlight Over National Plan to Control Ivory Trade (2014), http://wwf.panda.org/wwf_news/?230512/Thailand-in-the-spotlight-over-national-plan-to-control-ivory-trade.

excellent plan that everyone involved knows will fail, either partly or completely. The problem is the human element of the DNP [Department of National Parks, Wildlife & Plant Conservation]. The department has never properly enforced existing laws on protection of endangered species, including elephants. Simply put, it is too easy to buy fake papers detailing the origins of animals for trafficking."[393]

2. International trade vs. domestic market restrictions

CITES governs only international trade, not domestic markets. The CITES Parties' 1989 decision to uplist African elephants to Appendix I (while simultaneously establishing a process to selectively downlist certain populations) is often referred to as "the CITES ivory ban," a term which hides the fact that the restrictions applied solely to international trade in elephant parts between most countries. Leaving aside for a moment the implications of the dual Appendix listings, the crucial point is that the CITES ban did not (nor *could* it) limit domestic trade within any member nation; its authority stops at the international border.

This is not to say that the body ignored domestic trade entirely: "In 1997, the Parties adopted Res. Conf. 10.10, which recommended that ivory carving and importing countries enact comprehensive internal legislative, regulatory, and enforcement measures. Importantly, the Resolution recommended that Parties, including the U.S., 'register or license all importers, manufacturers, wholesalers and retailers' dealing in ivory products and that they 'establish a nationwide procedure, particularly in retail outlets, informing tourists and other non-nationals that they should not purchase ivory in cases where it is illegal for them to import it into their own home countries.' Res. Conf. 10.10 also recommends that Parties introduce recording and inspection procedures to monitor the flow of ivory."[394] Despite the existence of this resolution, "in 2004 the U.S. was found to be out of compliance with CITES Res. Conf.10.10"[395] and it is only recently that the U.S. federal government has begun implementing policies that would approximate the goals of the resolution, that is, strong domestic control and enforcement of ivory trade.

Other major consumer nations have different approaches to controlling their domestic ivory markets, but the case of China may be most instructive. As a requirement for participating in the second CITES-sanctioned stockpile sale, China was required to develop a comprehensive registration system to ensure that only legal ivory was bought and sold. The identification system (launched in 2004) consists of small official placards with a photo of the specific item and a short description; these placards must accompany the item through its commercial lifetime. Additionally, only government-sanctioned processers and retailers may engage in the business. Subsequent investigations have found that retailers frequently undermine the system by reusing the identification placard and/or by selling ivory without a government license: a 2011 investigation by the International Fund for Animal Welfare found that "[t]aken together, the unlicensed and non-compliant ivory facilities outnumbered legal ones – nearly six to one (135/23)."[396] In light of

[393] *Editorial: "War on Ivory" Will Fail*, 2014 Bangkok Post, Oct. 15, 2014 at (2014), http://www.bangkokpost.com/opinion/opinion/437640/war-on-ivory-will-fail.
[394] Allgood et al., *U.S. Ivory Trade*, at 36.
[395] Allgood et al., *U.S. Ivory Trade*, at 43.
[396] Int'l Fund for Animal Welfare, Making a Killing - a 2011 Survey of Ivory Markets in China 2, http://www.ifaw.org/united-states/resource-centre/making-killing.

such evidence, it is apparent that CITES' recommendations vis a vis registration and/or licensing are totally reliant on individual countries' willingness to enforce their own laws, a trust that is sorely abused in the real world.

3. CITES protections do not apply equally to all classes of wildlife products in international trade

According to the USFWS, the CITES *ban* "only applies to ivory acquired after elephants were listed under CITES. Ivory acquired prior to the species being listed under CITES (July 1, 1975 for Asian elephants and February 2, 1976 for African elephants) is considered pre-Convention. With proper CITES documentation, pre-Convention ivory can be imported, exported, or re-exported, unless stricter domestic laws prohibit such actions."[397] This leaves an entire class of ivory objects that escape CITES trade restrictions. This is a loophole that is being exploited by traffickers, but that could be addressed by the U.S. through an Endangered uplisting.

4. Inadequate monitoring

A basic element of any species conservation plan is an effective monitoring system. The CITES population and mortality index, called MIKE (Monitoring the Illegal Killing of Elephants) is inadequate for two major reasons: (A) It does not give a holistic picture of elephant mortality across the African continent, as it is limited to select sites; and (B) It "depends on often self-serving figures supplied by government authorities."[398] The result is that officials have to make assumptions based on piecemeal information – which is exacerbated by the lack of scientifically passable baseline data. The other component to CITES' monitoring efforts is the Elephant Trade Information System (ETIS), which is similarly plagued by problems of underreporting. According to a 2013 report coauthored by TRAFFIC's Tom Milliken, "The Elephant Trade Information System, a global database of reported seizures of illegal ivory, holds the only extensive information on illicit trade available. However inherent biases in seizure data make it difficult to infer trends; countries differ in their ability to make and report seizures and these differences cannot be directly measured."[399] This is a diplomatic way of acknowledging that many countries fail to adequately monitor or report law enforcement actions to ETIS, which fundamentally skews the data and gives a scant picture of the actual illegal trade. For example, the Democratic Republic of the Congo "has not provided any import/export or illegal trade statistics in accordance with the Convention since 2005."[400]

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[397] U.S. Fish & Wildlife Serv., CITES and Elephants: What Is the "global Ban" on Ivory Trade? (2013), https://www.fws.gov/le/pdf/CITES-and-Elephant-Conservation.pdf [hereinafter "USFWS, *CITES and Elephants*"].
[398] Orenstein, *Ivory, Horn and* Blood at 94.
[399] F. M. Underwood, et al. (2013) Dissecting the Illegal Ivory Trade: An Analysis of Ivory Seizures Data. PLoS ONE 8(10): e76539. http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0076539
[400] DLA Piper, Empty Threat: Does the Law Combat Illegal Wildlife Trade? 76 (Michael S. Lebovitz, Heidi Newbigging & Alice Puritz eds., 2014), http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCAQFjAA&url=http%3A%2F%2Fwww.dlapiperprobono.com%2Fexport%2Fsites%2Fpro-bono%2Fdownloads%2Fpdfs%2FEmpty-Threat---Does-the-law-combact-illegal-wildlife-trade---Summary-Report-2014.pdf&ei=_hbZVMSKBvLksATAqIHIBA&usg=AFQjCNFAyJw3j2m8R-55fCLY945Kq5hrDw&sig2=wyoY5AnbBxggsrNNbNyI6Q&bvm=bv.85464276,d.cWc&cad=rja [hereinafter "Piper, *Empty Threat*"].

5. Undermining conservation through stockpile sales

Twice (in 1999 and again in 2008/9) CITES has sanctioned sales of stockpiled ivory, actions which many experts believe helped to boost consumer demand for this product and obscured the infiltration of illegal ivory into the marketplace.[401] The sales were intended to raise money for conservation but the returns were minimal—according to the USFWS: "The 1999 auction involved the sale of raw ivory from Botswana, Namibia, and Zimbabwe to just one designated trading partner, Japan. The total amount of funds received from the auctions was approximately $5 million. In 2008, South Africa joined Botswana, Namibia, and Zimbabwe in the sale of their raw ivory stockpiles to two designated trading partners—China and Japan. The total amount of funds received from the auctions was approximately $15.5 million."[402] It is unclear whether even this small amount was allocated for conservation programs. According to a 2009 investigation, South African officials misappropriated their share of the proceeds; and an internal government memo acknowledged that there was "no proper control over the income and expenditures generated from the fund" and that "large amounts of money had not been accounted for."[403]

While legalization of ivory trade (primarily through the mechanism of regulated stockpile sales) is again a hot topic, with advocates claiming that a well-regulated trade could reduce pressure on elephant populations, the vast majority of academic and expert testimony has weighed in against these proposals, pointing to the destructive impact of past sales.[404]

According to the USFWS, although the U.S. supported previous stockpile sales, "[t]oday, given the current poaching crisis and the scale of illegal trade, it's unlikely that the United States would be able to support a one-off sale."[405] Numerous countries (including the U.S.) have instead staged high-profile ivory stockpile crushes and burns, lending credence to the idea that is better to remove this material from circulation than to stimulate trade; however, certain CITES member states continue to lobby for a third sale, while others continue to stockpile ivory in anticipation of less restrictive trade rules in the future.[406]

ii. Convention on Migratory Species

The Convention on the Conservation of Migratory Species of Wild Animals (CMS) is a 120-Party international treaty developed through the United Nations to provide a framework for international cooperation for the conservation of migratory species throughout their range.[407] As with CITES,

[401] Int'l Fund for Animal Welfare, *Elephant Ivory Stockpile Sales Help Create a Deadly New Currency in China*, June 4, 2012 at http://www.ifaw.org/international/news/elephant-ivory-stockpile-sales-help-create-deadly-new-currency-china.
[402] USFWS, *CITES and Elephants* at 2.
[403] Sipho Kings, *Misappropriation of Ivory Funds Threatens Rhino Horn Sale* , Mail & Guardian, Oct. 28, 2014, http://mg.co.za/article/2014-10-28-misappropriation-of-ivory-funds-threatens-rhino-horn-sale.
[404] Katarzyna Nowak, *Opinion: Irrelevant, Illogical, and Illegal–24 Experts Respond to Arguments Supporting Legalization of the Ivory Trade*, Nat'l Geographic - a Voice for Elephants Blog, Oct. 2, 2014, http://voices.nationalgeographic.com/2014/10/02/opinion-irrelevant-illogical-and-illegal-24-experts-respond-to-arguments-supporting-legalization-of-the-ivory-trade/.
[405] USFWS, *CITES and Elephants* at 2.
[406] Carey L. Biron, *In Anti-Poaching Warning, U.S. Destroys Ivory Stockpiles*, Inter Press Service News Agency, Nov. 14, 2013, http://www.ipsnews.net/2013/11/in-anti-poaching-warning-u-s-destroys-ivory-stockpiles/.
[407] Convention on the Conservation of Migratory Species of Wild Animals (CMS), *CMS*. 2014. Accessed January 14, 2015 from http://www.cms.int/en/legalinstrument/cms).

CMS designates listed species under Appendices. Participating countries have obligations to help conserve and restore populations of species listed in CMS Appendix I and also prevent unwarranted take.[408] Countries are encouraged to also take action on species listed in CMS Appendix II through the development of binding agreements and non-binding memoranda of understanding.

The African elephant is listed in CMS Appendix II for its entire range. Thirteen West African countries signed the West African Elephant Memorandum of Understanding in 2005 to encourage international collaboration in restoring and maintain elephant populations in their territory.[409] The memorandum promotes legal protection as a strategy for individual countries, but is a non-binding agreement. Furthermore, the West African population of elephants is only about 2% of the total African population[410]

iii. Convention on Biological Diversity

The Convention on Biological Diversity (CBD) is another international treaty developed through the United Nations that promotes the "conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources."[411] Parties meet every two years to discuss emerging threats and strategies. The convention requires each of the 194 participating countries to prepare a national biodiversity strategy that outlines the implementation of the Convention's goals and the attainment of its various targets.[412] The CBD helps streamline strategies for protecting and sustainably using biodiversity, but does not provide explicit protections for any specific animal including the African elephant.

In summary, CITES (while an important international mechanism for protecting species in trade) falls short of providing the protections needed for African elephants, and existing international legal mechanisms are inadequate to protect African elephants from extinction.

b. Regional agreements

i. African Union

The African Union (AU) is an intergovernmental organization comprised of all but one (Morocco) of the 54 African states. The AU was formed in 1992 as a successor to the Organization of African Unity which was created in 1963. The Executive Council of the AU developed conventions on issues of interest to member states including environmental concerns.[413]

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[408] Convention on the Conservation of Migratory Species of Wild Animals website (CMS). 2003. Accessed January 14, 2015from http://www.cms.int/sites/default/files/instrument/cms_convtxt_english.pdf.
[409] Convention on the Conservation of Migratory Species of Wild Animals (CMS). 2014. Accessed January 14, 2015 from http://www.cms.int/en/legalinstrument/west-african-elephants.
[410] CMS, *West African Elephants.*
[411] United Nations (UN). 1992. Convention on Biological Diversity. Accessed January 14, 2015 from http://www.cbd.int/doc/legal/cbd-en.pdf [hereinafter "UN, *Convention on Biological Diversity*"]
[412] UN, *Convention on Biological Diversity*.
[413] The African Union Commission (AU). 2015. AU in a nutshell. Retrieved January 14, 2015 from http://au.int/en/about/nutshell.

The African Convention on the Conservation of Nature and Natural Resources, entered into force in 1969, is one such convention that requires contracting states to "adopt measures to ensure conservation, utilization and development of soil, water, flora and faunal resources in accordance with scientific principles and with due regard to the best interests of the people."[414] The Convention considers African elephants a "Class B" species which, according to the convention, "shall be totally protected, but may be hunted, killed, captured or collected under special authorization granted by the competent authority."[415] While 31 countries have ratified the Convention, several with elephant populations are not listed, including countries with significant elephant populations, such as South Africa.[416] Furthermore, the Convention does not contain any enforcement mechanisms to address noncompliance and does not designate the role and frequency of meetings to update the agreement.

A Revised African Convention on the Conservation of Nature and Natural Resources was developed in 2003 that would, among other changes, establish a secretariat that would improve executive and implementation functions of the Convention.[417] The revised edition would also update rules pertaining to protected species such as the African elephant. As of July 2014, the revised Convention has not been adopted because only 12 countries have ratified it.[418]

ii. SADC Protocol on Wildlife Conservation and Law Enforcement

The Southern Africa Development Community (SADC), which is an inter-governmental organization of Southern African states, developed the Protocol on Wildlife Conservation and Law Enforcement in 1999. The Protocol, which came into force in 2003, lays down guidelines to foster international cooperation to ensure the "conservation and sustainable use of wildlife resources" under the jurisdiction of each member state.[419] The Protocol mandates the development and enforcement of legal instruments necessary to conserve wildlife resources, as well as the development and integration of conservation programs. The Protocol allows for sanctions if a state is not implementing conservation policies.[420]

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[414] The African Union Commission (AU). 1968. African Convention on the Conservation of Nature and Natural Resources. Retrieved January 14, 2015 from http://au.int/en/sites/default/files/AFRICAN_CONVENTION_CONSERVATION_NATURE_AND_NATURAL_RESOURCES.pdf [hereinafter "AU, *African Convention on the Conservation of Nature*"].

[415] AU, *African Convention on the Conservation of Nature*..

[416] The African Union Commission (AU). 2013. List of countries which have signed, ratified/acceded to the African Convention on the Conservation of Nature and Natural Resources. Retrieved January 14, 2015 from http://au.int/en/sites/default/files/Nature%20and%20Natural%20Resources_0.pdf [hereinafter "AU, *List of countries*"].

[417] The African Union Commission (AU). 2003. African Convention on the Conservation of Nature and Natural Resources (revised version). Retrieved January 14, 2015 from http://au.int/en/sites/default/files/AFRICAN_CONVENTION_CONSERVATION_NATURE_NATURAL_RESOURCES.pdf.

[418] AU, *List of countries.*

[419] Southern Africa Development Community (SADC). 1999. Protocol on Wildlife Conservation and Law Enforcement. Retrieved January 14, 2015 from http://sadc-tribunal.org/wp-content/uploads/2013/03/WildlifeConservation2.pdf [hereinafter "SADC, *Protocol on Wildlife Conservation*"].

[420] SADC, *Protocol on Wildlife Conservation*.

iii. Lusaka Agreement

The Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora was adopted and came into force in 1996. Seven African countries have since become Parties to the Agreement. The role of the Agreement is to create a task force that facilitates the enforcement of national wildlife laws through collaboration and "ultimately eliminating illegal trade in wild fauna and flora."[421] The Lusaka Agreement Task Force has focused on using law enforcement, capacity building, and collaboration to help reduce wildlife trafficking including elephant ivory smuggling.

c. National laws

The 37 African Elephant range states, along with the many transit and consumer nations, have taken a variety of approaches to solving the problems of wildlife trafficking, habitat loss, over-exploitation and other species threats (exacerbated recently by the growing influence of international organized criminal syndicates driving the poaching crisis). In general, however, most stakeholder countries do not have the infrastructure, funding, expertise, or political will to deal with the many different threats to elephants.

Despite a brief period of rebound in the early 2000's,[422] over the past three decades African elephants have faced overall declines in most regions where they are found,[423] including reductions in both range size and population numbers. These declines can be traced to such threats as habitat loss,[424] associated increases in human-elephant conflict,[425] and rampant poaching.[426] The threats are aided by a lack of regulatory tools and controls in relevant countries to protect elephants adequately. More specifically, better regulatory mechanisms are needed on the ground in range countries to stop the loss of habitat[427] and prevent elephant killings;[428] in elephant product transit countries to disrupt trafficking;[429] and in consumer nations to curb consumption and demand for elephant products.[430]

With poaching in particular, weak governance and political conflicts are systemic problems facilitating the current elephant crisis.[431] For example, elephants are known to be endangered by inadequate law enforcement and/or insufficient infrastructure to combat poaching and trafficking threats in range countries with still sizable elephant populations[432] like Cameroon,[433] CAR,[434]

[421] Lusaka Agreement Task Force (LATF). 2013. Vision and Mission Statement. Retrieved January 14, 2015 from http://lusakaagreement.org/?page_id=126.
[422] UNEP et al., *A Rapid Response* at 22
[423] UNEP et al., *A Rapid Response* at 22
[424] UNEP et al., *A Rapid Response* at 15.
[425] IUCN Red List, Loxodonta Africana.
[426] UNEP et al., *A Rapid Response* at 32.
[427] UNEP et al., *A Rapid Response* at 15.
[428] UNEP et al., *A Rapid Response* at. 22.
[429] UNEP et al., *A Rapid Response* at 40.
[430] UNEP et al., *A Rapid Response* at 40.
[431] UNEP et al., *A Rapid Response* at 69.
[432] UNEP et al., *A Rapid Response* at 25.
[433] UNEP et al., *A Rapid Response* at 41; African Elephant Status Report 2007 at 31.
[434] African Elephant Status Report 2007 at 36.

Congo,[435,436] DRC,[437] Gabon,[438] Kenya,[439] Mozambique,[440,441] South Africa,[442] Tanzania,[443,444] Uganda,[445,446] Zambia,[447] and Zimbabwe.[448] Similarly, elephant populations are being negatively impacted in range countries like Chad,[449] CAR,[450] and DRC,[451] where these nations are facing political instability and conflict that can exploit infrastructure gaps and open the door for organized crime and poaching rings.[452]

In addition to range countries like Kenya, South Africa, and Tanzania that also serve as transit hubs for trafficking elephant products,[453] there are countries outside of Africa that are transit—and sometimes end—points for these products. These include Asian countries like China, Hong Kong SAR, Malaysia, the Philippines, Thailand, and Viet Nam.[454] Weak governance as well as institutional corruption have been flagged as exacerbating factors in many of these elephant product transit countries of concern.[455]

In 2014 the international law firm DLA Piper, in concert with the UK-based NGO United For Wildlife, released a seminal report on African and Asian legislative, jurisprudential, and law enforcement mechanisms for controlling wildlife trafficking. The report, *Empty Threat: Does the Law Combat Illegal Wildlife Trade?*, was highly critical in its assessment of much of the African and Asian continental capacity in this regard, and spotlighted the need for drastic reform in many of the key countries along the elephant product supply chain. This included criticisms of laws and infrastructure to protect wildlife in elephant range and/or transit countries like Botswana,[456] Cameroon,[457] DRC,[458] Kenya,[459] and Tanzania[460] as well as transit and consumer countries like China,[461] Thailand,[462] and Viet Nam.[463]

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[435] African Elephant Status Report 2007 at 46.
[436] UNEP et al., *A Rapid Response* at 41.
[437] UNEP et al., *A Rapid Response* at 41.
[438] UNEP et al., *A Rapid Response* at 41; African Elephant Status Report 2007 at 62.
[439] UNEP et al., *A Rapid Response* at 41.
[440] African Elephant Status Report 2007 at 132.
[441] UNEP et al., *A Rapid Response* at 41.
[442] UNEP et al., *A Rapid Response* at 41.
[443] USFWS website, http://www.fws.gov/news/ShowNews.cfm?ID=2E6FF2A2-E10F-82BC-DAE08807810E3C6B
[444] UNEP et al., *A Rapid Response* at 41.
[445] African Elephant Status Report 2007 at 106.
[446] UNEP et al., *A Rapid Response* at 41.
[447] African Elephant Status Report 2007 at 152.
[448] African Elephant Status Report 2007 at 157.
[449] UNEP et al., *A Rapid Response* at 40.
[450] UNEP et al., *A Rapid Response* at 40.
[451] UNEP et al., *A Rapid Response* at 51.
[452] UNEP et al., *A Rapid Response* at 57.
[453] UNEP et al., *A Rapid Response* at 41.
[454] UNEP et al., *A Rapid Response* at 43.
[455] UNEP et al., *A Rapid Response* at 43.
[456] Piper, *Empty Threat* at 6.
[457] Piper, *Empty Threat* at 31.
[458] Piper, *Empty Threat* at 75.
[459] Piper, *Empty Threat* at 99.
[460] Piper, *Empty Threat* at 208.
[461] Piper, *Empty Threat* at 57.
[462] Piper, *Empty Threat* at 189.
[463] Piper, *Empty Threat* at 258.

Similar to unabated poaching, the ongoing and dramatic loss of habitat[464] in important elephant range countries is proof that existing national laws are inadequate. For example, between 1990 and 2005, the country of Tanzania lost forest cover at a rate double the average for low human development countries and five times the mean global rate.[465] This continued habitat loss has resulted in more than 37% of the country's forest and woodland habitat having disappeared since 1990.[466] Additionally, ongoing loss of habitat has created more human-elephant conflict and further reduced elephant range in countries like Tanzania that formerly hosted bountiful elephant populations.[467]

Similarly alarming is that the amount of land set aside for agriculture in Sub-Saharan Africa overall increased by 25% between 1970 and 2000.[468] And conversion for crop-land is just one type of habitat loss impacting elephants, along with increased livestock, human population growth, and urban development spread, all of which lead to increased human-elephant conflict[469] and subsequent elephant losses.[470] Without regulatory tools designed to control this loss, elephant habitat will continue to shrink.

It is important to note that even if one country has ostensibly strong laws protecting elephants and their habitats, transient or border populations can easily be negatively impacted by laws—or lack thereof—in other range, transit or consumer countries.[471]

In conclusion, the continuing decline in range and population numbers for elephants in almost all regions of Africa where they exist clearly show that elephant range, transit and consumer countries do not have adequate regulatory mechanisms in place to protect elephants from extinction.

i. Corruption

In many countries in Africa and Southeast Asia, corruption presents a serious threat to wildlife protection measures, such as elephant product trade controls and anti-poaching programs. As Bennet (2014) detailed in *Conservation Biology*, high levels of corruption in these regions make it difficult to enforce current regulations and should also be taken into account while examining proposals to legalize the ivory trade. Bennet writes, "If we are to conserve remaining wild

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[464] IUCN Red List, Loxodonta Africana.
[465] P. Chardonnet, et al. (2010). *Managing the conflicts between people and lion: Review and insights from the literature and field experience* (Wildlife Management Working Paper 13). Rome, Italy: Food and Agriculture Organization of the United Nations, http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CCAQFjAA&url=http%3A%2F%2Fwww.fao.org%2Fdocrep%2F012%2Fk7292e%2Fk7292e00.pdf&ei=ghfZVLXcE-K1sATpxILIBw&usg=AFQjCNFGdHD8KbpcGcqnyEZjmhu3hYpITw&sig2=gGi2twhV43qbHtXDbwA3Qg&bvm=bv.85464276,d.cWc [hereinafter "Chardonnet, et al., *Managing the conflicts between people and lion*"].
[466] C. Packer et al., *Effects of Trophy Hunting on Lion and Leopard Populations in Tanzania*, Conservation Biology (Jul. 2009), available at http://www.cbs.umn.edu/sites/default/files/public/downloads/Effects%20of%20trophy%20hunting%20on%20populations%20of%20lions%20and%20leopards%20in%20TZ.pdf.
[467] African Elephant Status Report 2007 at 99.
[468] Chardonnet, et al., *Managing the conflicts between people and lion*.
[469] UNEP et al., *A Rapid Response* at 15.
[470] UNEP et al., *A Rapid Response* at 41.
[471] African Elephant Status Report 2007 at 3.

populations [of elephants], we must close all markets because, under current levels of corruption, they cannot be controlled in a way that does not provide opportunities for illegal ivory being laundered into legal markets."[472] This includes markets in the U.S. that are allowed under the current Threatened listing.

African elephant range states are among the most corrupt countries on the planet, with Bennet (2014) noting that "Of the 12 countries in Africa estimated to have elephant populations of 15,000 animals or more (UNEP et al. 2013), 8 are among the bottom 40% of the world's most corrupt countries and 3 are among the bottom 11% (Transparency International 2013)." [473] Corruption extends beyond turning a blind eye or even government officials' facilitation of illegal trade: in several countries including the DRC, South Sudan and Uganda, national military forces have been implicated in the direct slaughter of African elephants.[474] (Note that DRC and Uganda are parties to CITES, providing another reason to be skeptical of the efficacy of that treaty.)

In conclusion, while there exists a myriad of environmental laws and other relevant regulations in most elephant range, transit, and consumer nations, the ongoing decline of the species (in the face of habitat loss, overexploitation, and other threats) shows definitively that these systems are not adequate to save the species.

d. U.S. law

i. African Elephant Conservation Act

The 1988 African Elephant Conservation Act (AfECA) "created a major program for the conservation of African Elephants"[475] that included funding for conservation programs, and international trade restrictions for elephant ivory. The AfECA was passed at a time when there was a global, legal ivory trade. It allowed the U.S. to establish moratoria on imports of African elephant ivory from other countries, and set out criteria that needed to be met to remove those moratoria for each ivory exporting country. The Act prohibits: (1) The importation of raw ivory from any country other than an ivory producing country; (2) the export of raw ivory from the US; (3) the importation of raw or worked ivory that was exported from an ivory producing country in violation of that country's laws or of the CITES Ivory Control System; (4) the import of worked ivory, other than personal effects, from any country unless that country has certified that such ivory was derived from legal sources; and (5) the importation of raw or worked ivory from a country for which a moratorium is in effect.[476]

No CITES Appendix I range state has yet been determined to qualify for a blanket U.S. import exemption for ivory as provided in AfECA.[477] The Act does not address the import of sport hunted African elephant trophies and clearly recognizes that the ESA grants USFWS authority to enact

[472] BENNETT, E. L. Bennett (2014), Legal Ivory Trade in a Corrupt World and its Impact on African Elephant Populations. Conservation Biology. Abstract: http://onlinelibrary.wiley.com/doi/:: 10.1111/cobi.12377/abstract [hereinafter: Bennett, *Legal Ivory Trade in a Corrupt World*"].
[473] Bennett, *Legal Ivory Trade in a Corrupt World* at 3.
[474] Orenstein, *Ivory, Horn and Blood* at 116.
[475] P. Saundry, *Endangered Species Act: United States*, available at http://www.eoearth.org/view/article/152413/.
[476] 16 U.S.C. §§ 4222 *et seq*.
[477] U.S. Fish & Wildlife Serv., Importing Your Leopard or African Elephant Sport-Hunted Trophy (2014), http://www.fws.gov/international/pdf/factsheet-import-leopard-elephant-sport-hunted-trophy-2013.pdf.

additional restrictions on trade in ivory and other elephant parts. 16 U.S.C. §§ 4222, 4223, 4241.

ii. Endangered Species Act

The Endangered Species Act (ESA) is one of the most comprehensive and important wildlife conservation statutes in existence today, but current ESA protections applied to African elephants are inadequate.

Pursuant to the ESA (16 U.S.C. § 1538(a)) and Fish and Wildlife Service regulations (50 C.F.R. §§ 17.21, 17.22), once the Service lists a species as endangered, individuals of listed species are protected from import, export, take, and interstate commerce unless such action will "enhance the propagation or survival of the affected species" or is for scientific research consistent with the conservation purpose of the ESA. 16 U.S.C. § 1539(a)(1)(A); 50 C.F.R. §§ 17.21, 17.22. As the plain language of the statute makes clear, enhancement authorization may only be issued for activities that *positively benefit* the species in the wild. *See also* U.S. Fish and Wildlife Service Handbook for Endangered and Threatened Species Permits (1996) (making clear that an enhancement activity "must go beyond having a neutral effect and actually have a positive effect").

Enhancement authorization must be granted on a case-by-case basis, with an application and opportunity for meaningful public participation. 16 U.S.C. § 1539(c); *Friends of Animals v. Salazar*, 626 F. Supp. 2d 102, 119 (D.D.C. 2009). Before the Service can issue authorization to conduct otherwise prohibited acts, it must find that: (1) the permit or registration was "applied for in good faith;" (2) the permit or registration "will not operate to the disadvantage of such endangered species;" and (3) the proposed action "will be consistent with the purposes and policy" of the ESA (i.e., *conservation*[478]). 16 U.S.C. § 1539(c)-(d). As explained by Congress, these requirements were intended "to limit substantially the number of exemptions that may be granted under the act." H. R. Rep. No. 93-412 p. 17 (1973) (emphasis added). Implementing regulations further require that applicants provide detailed information about the animals, persons, facilities, and actions involved in the otherwise prohibited activity. 50 C.F.R §§ 17.21(g), 17.22; *id.* § 13.21(b)(2)(3) (authorization may not be issued if applicant "failed to disclose material information required" or "failed to demonstrate a valid justification").

In deciding whether to issue an enhancement permit, the USFWS must consider "[t]he probable and indirect effect which issuing the permit would have on the wild populations of the wildlife sought to be covered by the permit;" "[w]hether the permit . . . would in any way, directly or indirectly, conflict with any known program intended to enhance the survival probabilities of the population from which the wildlife sought to be covered by the permit was or would be removed;" "[t]he opinions or views of scientists or other persons or organizations having expertise concerning the wildlife or other matters germane to the application;" and "[w]hether the expertise, facilities, or other resources available to the applicant appear adequate to successfully accomplish the objectives stated in the application." 50 C.F.R. § 17.22(a)(2).

[478] The primary purpose of the ESA is to "provide a program for the conservation of such endangered species." 16 U.S.C. § 1531(b). The term "conservation" means "to use…all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary" – i.e. to recover the species in the wild so that it may be taken off of the list of endangered species. 16 U.S.C. § 1532(3).

When a species is listed as threatened, individuals of the species may not be subjected to import, export, take, or interstate commerce, unless such action is conducted pursuant to a permit or a special rule. 16 U.S.C. § 1538(a); 50 C.F.R. §§ 17.31, 17.32, 17.40. Special rules must be designed and implemented to promote the conservation of the species. *See Sierra Club v. Clark*, 755 F.2d 608 (8th Cir. 1985). But under the current Threatened listing and special rule (50 C.F.R. § 17.40(e)), which largely mirrors the restrictions established by the AfECA, trade in African elephant parts and products is not sufficiently regulated to protect the species from extinction, as required by law.

a. Ivory

According to USFWS Director's Order 210 (issued in 2014 to urge strict enforcement of existing law), pursuant to the Threatened listing and the AfECA, it is currently lawful to import certain elephant parts and products to the U.S., as follows:

(1) Raw or worked African elephant ivory imported by an employee or agent of a Federal, State, or tribal government agency for law enforcement purposes.

(2) Raw or worked African elephant ivory imported for genuine scientific purposes that will contribute to conservation of the species.

(3) Worked African elephant ivory imported for personal use as part of a household move or as part of an inheritance, provided that the worked elephant ivory:

- Was legally acquired prior to February 26, 1976;
- Has not subsequently been transferred from one person to another person for financial gain or profit since February 25, 2014; and
- The item is accompanied by a valid Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) pre-Convention certificate.

(4) Worked African elephant ivory imported as part of a musical instrument, provided that the worked elephant ivory:

- Was legally acquired prior to February 26, 1976;
- Has not subsequently been transferred from one person to another person for financial gain or profit since February 25, 2014;
- The person or group qualifies for a CITES musical instrument certificate; and
- The musical instrument containing elephant ivory is accompanied by a valid CITES musical instrument certificate or an equivalent CITES document that meets all of the requirements of CITES Resolution Conf. 16.8.

(5) Worked African elephant ivory imported as part of a travelling exhibition, provided that the worked elephant ivory:

- Was legally acquired prior to February 26, 1976;
- Has not subsequently been transferred from one person to another person for financial gain or profit since February 25, 2014;

- The person or group qualifies for a CITES travelling exhibition certificate; and
- The item containing elephant ivory is accompanied by a valid CITES travelling exhibition certificate or an equivalent CITES document that meets the requirements of 50 CFR 23.49.

Further, the ESA special rule allows for interstate commerce in lawfully imported ivory, leading to a robust domestic market for elephant parts and products that serves as a cover for rampant illegal trade and fails to adequately protect the species (as described in detail above).

b. Sport hunted trophies

Under the African elephant special rule, the importation of sport hunted trophies is allowed under the following circumstances: If the trophy's country of origin has notified the USFWS of its ivory quota[479] for the year of export; if CITES permit requirements are met; if an enhancement finding has been made; and if marking and labelling requirements have been met.[480] Due to the differential CITES listing, in practice this means that the U.S. does not require individual permits for imports of sport-hunted African elephant trophies from Botswana, South Africa, and Namibia, while the U.S. does require an importer to obtain a permit for the import of trophies from Appendix I range states. The Service has previously asserted that it considers trophy-hunting of imperiled species to have a positive overall impact on species conservation.[481] However, there is minimal data showing this to be the case, especially as pertains to elephants and other iconic African species.[482]

But in 2014, the Service suspended imports of elephant trophies from Tanzania and Zimbabwe, finding that such countries have suffered from severe poaching crises and are not sustainably managing their elephant populations.[483]

The recent suspensions of trophy imports from Tanzania and Zimbabwe call attention to the fact that the Service has historically not exercised maximum oversight of African elephant range states to ensure that U.S. activities are not exploiting poorly managed populations.

According to Selier et al. (2014). in a recent peer-reviewed article published in *The Journal of Wildlife Management*, even those range states from which USFWS currently allows trophy imports may be setting unsustainably high hunting quotas: in the Greater Mapungubwe

[479] In this case, CITES considers the term "ivory quota" to collectively refer to "procedures to control the international trade in ivory from African elephants," including trophies. (http://www.cites.org/eng/cop/06/doc/E06-21.pdf)
[480] *See* 50 C.F.R. § 23.74.
[481] USFWS, Suspension of Import of Elephant Trophies Taken in Tanzania and Zimbabwe: Questions and Answers. available at http://www.fws.gov/international/pdf/questions-and-answers-suspension-of-elephant-sport-hunted-trophies.pdf (Accessed January 14, 2015).
[482] Economists at Large. (2013). The $200 million question: How much does trophy hunting really contribute to African communities? A report for the African Lion Coalition, prepared by Economists at Large, Melbourne, Australia, http://www.ecolarge.com/our-work/.
[483] *See* 79 Fed. Reg. 44459, 44460 (July 31, 2014) ("Without management plans with specific goals and actions that are measurable and reports on the progress of meeting these goals, the Service cannot determine if…Zimbabwe is implementing, on a national scale, appropriate management measures for its elephant populations."); U.S. Endangered Species Act Enhancement Finding for Tanzanian Elephants (http://www.fws.gov/international/pdf/enhancement-finding-2014-elephant-Tanzania.PDF) ("Questionable management practices, a lack of effective law enforcement, and weak governance have resulted in uncontrolled poaching and catastrophic population declines in Tanzania.").

Transfrontier Conservation Area (at the nexus of South Africa, Botswana, and Zimbabwe), scientists found that, in contrast to current hunting allowances, "only a small number of bulls (<10/year) could be hunted sustainably. At current rates of hunting, under average ecological conditions, trophy bulls will disappear from the population in less than 10 years."[484]

The special rule also allows for imports and exports of elephant products other than sport-hunted trophies and ivory, such as skin or body parts, so long as such activities comply with CITES permitting guidelines. Domestic trade is also allowed in such parts as long as the parts were not illegally imported.[485]

Thus, the current Threatened listing for African elephants, which minimizes federal oversight of imports and allows substantial domestic trade in the species, fails to adequately protect the species, and uplisting to Endangered status is required by law. While some states, such as New York and New Jersey, have recently taken action to restrict their ivory markets, federal action is necessary to fully address the overutilization that is contributing to the demise of this iconic species. Indeed, the Service has recognized the need to increase protection for the African elephant under the Endangered Species Act, though to date it has not formally proposed any such regulations.[486]

A notable conservation benefit to the African elephant resulting from an Endangered listing would be that all applications for otherwise prohibited activities would be subject to public comment and review. This would increase the information available to the USFWS, by enabling experts and others with pertinent and timely information to inform the agency's decision-making. Further, improved transparency would benefit the species by shining a light on potentially illegal trade.

iii. Lacey Act

The Lacey Act (16 U.S.C. §§ 3371-3378) makes it "unlawful to import, export, sell, acquire, or purchase fish, wildlife or plants taken, possessed, transported, or sold: 1) in violation of U.S. or Indian law, or 2) in interstate or foreign commerce involving any fish, wildlife, or plants taken possessed or sold in violation of State or foreign law." Essentially, Lacey criminalizes commercial activity in wildlife products—such as poached elephant products— that were illegally obtained in the first place. The law is considered to be among the most important wildlife trade laws in the U.S., but without strong underlying state and international protection for the species, the Lacey Act is not an adequate regulatory mechanism to save this species from extinction.

[484] S. Selier et al. (2014), Sustainability of elephant hunting across international borders in southern Africa: A case study of the greater Mapungubwe Transfrontier Conservation Area. The Journal of Wildlife Management, 78: 122–132.
http://www.researchgate.net/publication/259539652_Sustainability_of_elephant_hunting_across_international_borders_in_southern_Africa_A_case_study_of_the_greater_Mapungubwe_Transfrontier_Conservation_Area
[485] 50 C.F.R. § 17.40(e).
[486] *USFWS Moves to Ban Commercial Elephant Ivory*.

E. Other natural or manmade factors affecting the species' existence

Several biological traits make African elephants susceptible to over-utilization. African elephants are often used as one of the best examples of a 'k-selected' species: those species with traits such as large body size, long life expectancy, a late age at which they reach sexual maturity, and the production of fewer offspring, which often require extensive parental care until they mature. This contrasts with 'r-selected' species which produce many offspring, each of which has a relatively low probability of surviving to adulthood. The elephant's low reproductive output means that offtake can easily exceed reproductive output and result in population decline. This is especially true when females of reproductive age are killed, as happens with elephant poaching and trophy hunting, because this further diminishes the reproductive output.

V. CONCLUSION

This Petition demonstrates that the African elephant species meets the statutory criteria for an Endangered listing under the ESA. The species is currently "in danger of extinction throughout all or a significant portion of its range" and, therefore, must be listed as Endangered.[487] The future security and viability the African elephant is uncertain – the species faces a multitude of threats including habitat loss, exploitation, killings from human-elephant-conflict, and rampant poaching.

As the U.S. is not part of the African elephant's natural range, protection under the ESA would occur by, *inter alia*, a prohibition on the import into the U.S., and interstate commerce within the U.S., of elephant specimens except where the activity enhances the propagation or survival of the species or is for scientific purposes.[488] Listing the African elephant under the ESA would directly benefit this species in crisis by significantly limiting trade linked to unnecessary killings for sport or commercial purposes. An uplisting would also allow for and encourage the U.S. to provide elephant range States with further assistance in the development and management of programs useful to the conservation of the species. Such a listing would also serve to heighten awareness of the importance of conserving the African elephant among foreign governments, conservation organizations, and the general public.

The iconic African elephant is in danger of extinction if action is not immediately taken to reverse the current trend toward extinction. The U.S. is the world's largest importer of African elephant hunting trophies, and has large domestic ivory markets that facilitate illegal trade. It is time for the U.S. to play a leading role in the effort to save the African elephant. Listing the species as Endangered under the ESA is a significant and necessary step toward controlling unsustainable exploitation, curbing demand by Americans, and keeping this crisis in the eye of the global conservation community.

[487] 16 U.S.C. §§ 1532(6), 1533.
[488] 16 U.S.C. §§ 1538(a), 1539(a).