

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



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

Species specific matters

Elephants (Elephantidae spp.)

ADDENDUM TO THE REPORT ON MONITORING THE ILLEGAL KILLING OF ELEPHANTS (MIKE)

1. This document has been prepared by the Secretariat based on information received since the submission of document CoP17 Doc. 57.5. Specifically, this addendum provides an update on levels of illegal killing of elephants in Asia, as well as estimates of the scale of illegal killing of elephants in Africa in 2015.

Levels of and trends in illegal killing of elephants in Asia

2. Information on trends in levels of illegal killing of elephants in Asia up to 2012 was provided in the addendum to document CoP16 Doc. 53.1. This section provides an update on those trends, including new data covering the period ending on 31 December 2015.
3. In late August 2016, records of 497 carcass found in the ten MIKE sites in India in 2014 and 2015 were submitted to the MIKE programme by the MIKE National focal point for India. MIKE sites in the south of the country, which support over 50% of India's elephant population, had the highest number of carcass reports. More than 70% of the records (207 carcasses) were from Mysore Elephant Reserve (ER) in the state of Karnataka and Nilgiri ER in the state of Tamil Nadu (150 carcasses). Myanmar also submitted records of 36 carcass found in 2015, but as none of those records were found in the designated MIKE sites, they were therefore not included in this analysis. No other carcass reports were received from Asian elephant range States. Bangladesh, Bhutan and Nepal reported that no carcasses had been found at their sites in 2014 or 2015.
4. The new data were combined with the records reported at CoP16 (CoP16 Doc. 53.1 Addendum) and additional records received from India for the years 2007-2013. Altogether, the data set for the trend analysis consists of 2,892 records of elephant carcasses found between 2003 and the end of 2015 at 23 MIKE sites in 11 range States in Asia (namely Bangladesh, Bhutan, Cambodia, China, Indonesia, India, Laos, Myanmar, Malaysia, Thailand, and Vietnam). Approximately 95% of the records were from MIKE sites in India, which holds the majority of the Asian elephant population. The MIKE site in China, Xishuangbanna Nature Reserve, reported the second largest number of records, with 1.6% of the total, followed by the two sites in Indonesia (Way Kambas and Bukit Barisan Selatan, both in Sumatra) at 1%. The remaining eight countries each contribute less than 1% to the total number of the records.

PIKE trends in Asia

5. The upper chart in Figure 1 shows estimated marginal mean annual PIKE values, with 90% confidence intervals, from 2003 to 2015, for MIKE sites in Asia from which reports have been received. While PIKE levels throughout the 2013-2015 period remain below the 0.5 level, the chart shows a steady increase in average levels of illegal killing of elephants between 2003 and 2006, followed by a decreasing trend up to 2008. The mean PIKE values from 2008 to 2013 remained relatively flat but seemed to take an upward turn thereafter. It remains to be seen whether this upward trend will be sustained. The mean PIKE value in 2015 was slightly lower than the highest value observed in 2006. It is important to note that the illegally killed elephants include elephants killed in conflict situations, which account for a substantial proportion of the

total. For instance, 40% of the illegally killed elephants reported between 2007 and 2013 were females, which do not carry ivory.

- The lower chart shows the total number carcasses reported, irrespective of cause of death. The number of carcasses from 2007 to 2013 remained relative flat, with average value 286 carcasses per year, and from 2014 and 2015 shows a downward trend, with an average value of 248 carcasses per year. While the number of reporting sites has declined from 16 in earlier years to 8 in 2014 and 2015, the sites that did not report in 2014 and 2015 usually only reported small numbers of carcasses.

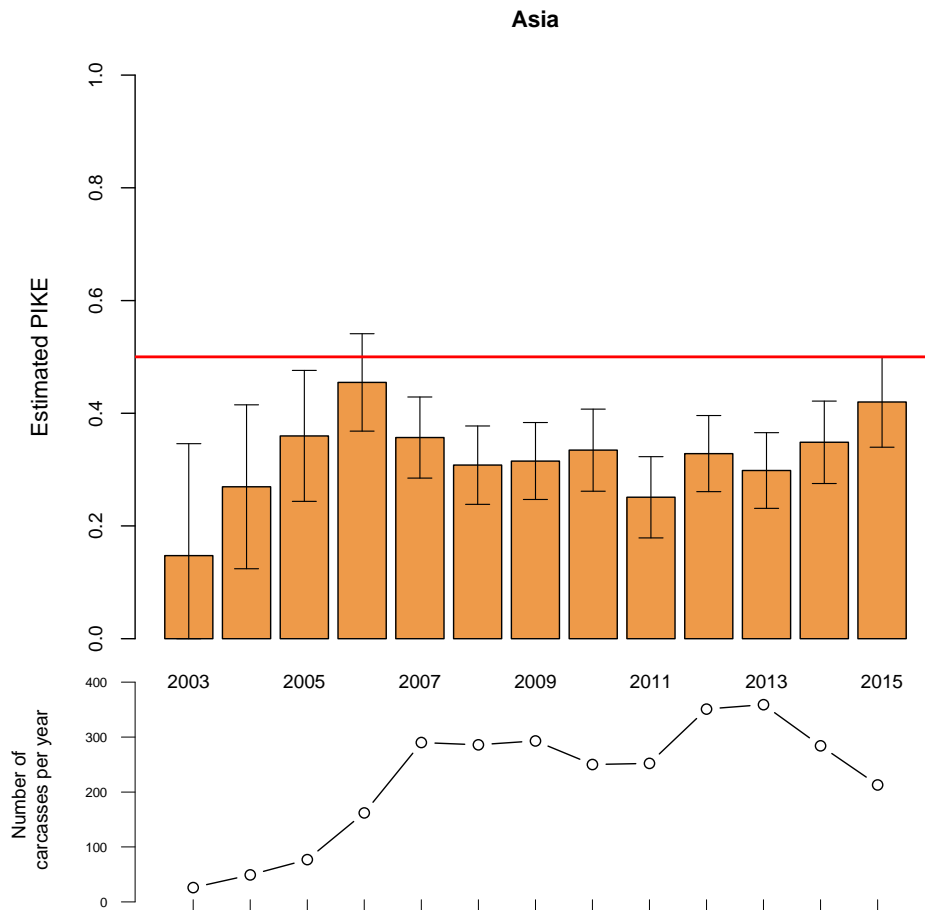


Figure 1. The upper chart shows the PIKE trend in Asia with 90% confidence intervals, based on 2,892 elephant carcasses (illegally killed or otherwise) reported to MIKE for the period 2003-2015. PIKE levels above the horizontal line at 0.5 (i.e. where half of dead elephants found are deemed to have been illegally killed) are cause for concern. The lower graph shows the total number of carcasses reported by year, irrespective of cause of death.

Updated estimates scale of illegal killing in Africa

- In September 2016, the IUCN African Elephant Specialist Group (AfESG) of the IUCN Species Survival Commission released the African Elephant Status Report 2016, which provides elephant population estimates obtained up to the end of 2015. This includes estimates from the Great Elephant Census funded by the Paul Allen Family Foundation and forest surveys conducted in Central Africa with funding from the Wildlife Conservation Society (WCS) and the World Wide Fund for Nature (WWF). Subregional and continental estimates from this report were used to derive updated estimates of numbers of elephants killed illegally in 2015, using exactly the same methodology described in document CoP16 Doc. 57.5.
- Figure 2 shows estimated numbers of illegally killed elephants in 2006, 2013 and 2015 by subregion under two natural mortality scenarios (namely 2% and 3%, as in document CoP17 Doc 57.5). Continental estimates are shown in Table 1. These estimates extrapolate beyond MIKE sites under the assumption that poaching rates derived at the subregional level are representative of their respective subregions.

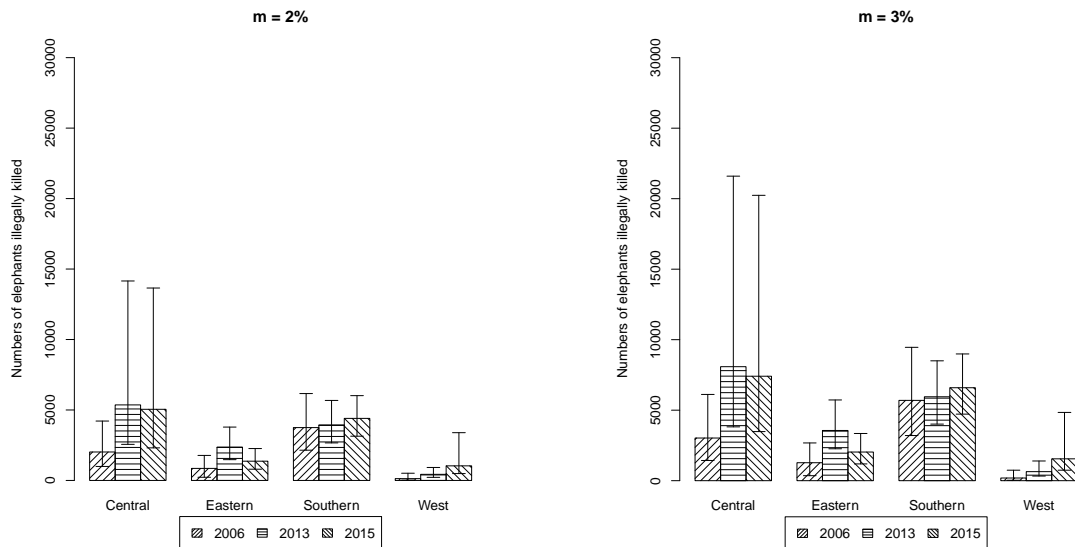


Figure 2. Subregional estimates (medians) of numbers of elephants illegally killed in 2006, 2013 and 2015, with 90% confidence intervals, under two natural mortality scenarios: 2% average natural mortality (left), and 3% average natural mortality (right). These estimates are extrapolated to the entire African elephant population estimates for each subregion, and not just to the population at MIKE sites.

Table 1. Continental estimates (medians) of African elephants killed in 2006 and 2013, with 90% confidence intervals, for two natural mortality scenarios (2% and 3%). These estimates are extrapolated to the entire African elephant population estimate, and not just to the population at MIKE sites.

Year	2% natural mortality		3% natural mortality	
	Estimate	90% confidence interval	Estimate	90% confidence interval
2006	7,544	[4,560 - 11,531]	11,291	[6,785 - 17,390]
2013	14,533	[8,634 - 25,742]	21,291	[12,913 - 36,734]
2015	13,429	[8,786 - 20,826]	19,944	[13,185 - 31,090]

- The estimates for 2013 and 2015 are substantially higher than those for 2006, as would be expected given the fact that PIKE levels have remained high overall since the peak in 2011. While the estimates for 2013 and 2015 are numerically different, statistically they are not significantly different, and indeed the continental PIKE estimate for 2015 is little changed from the value estimated in 2013.