



# Evaluating MIKE & PIKE: The Relationship Trend Between Elephant Carcasses & The Illegal Trade in Endangered Elephants

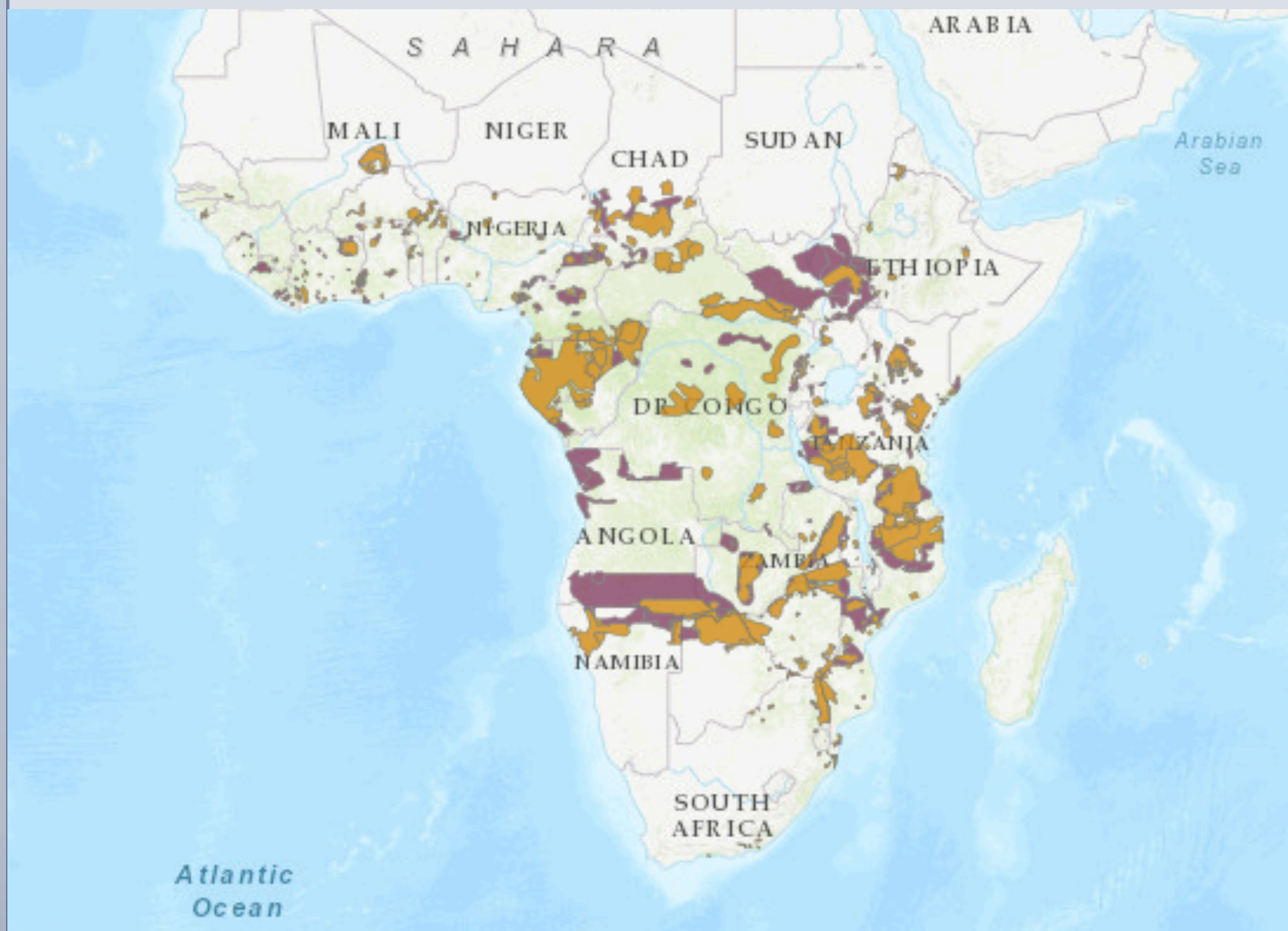
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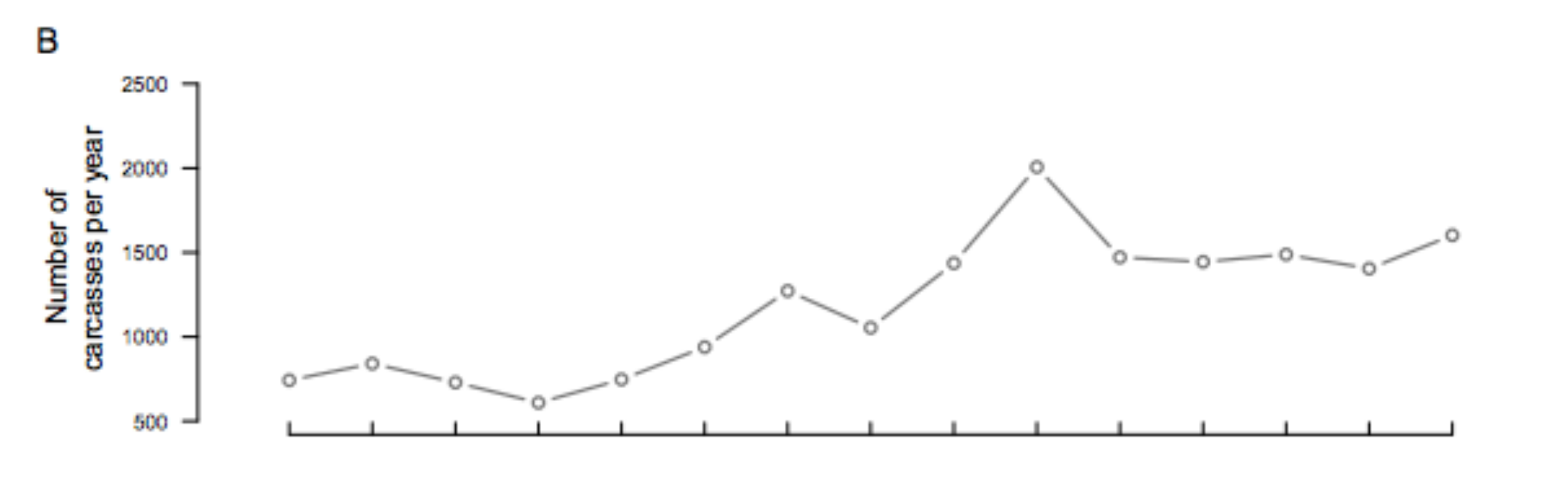
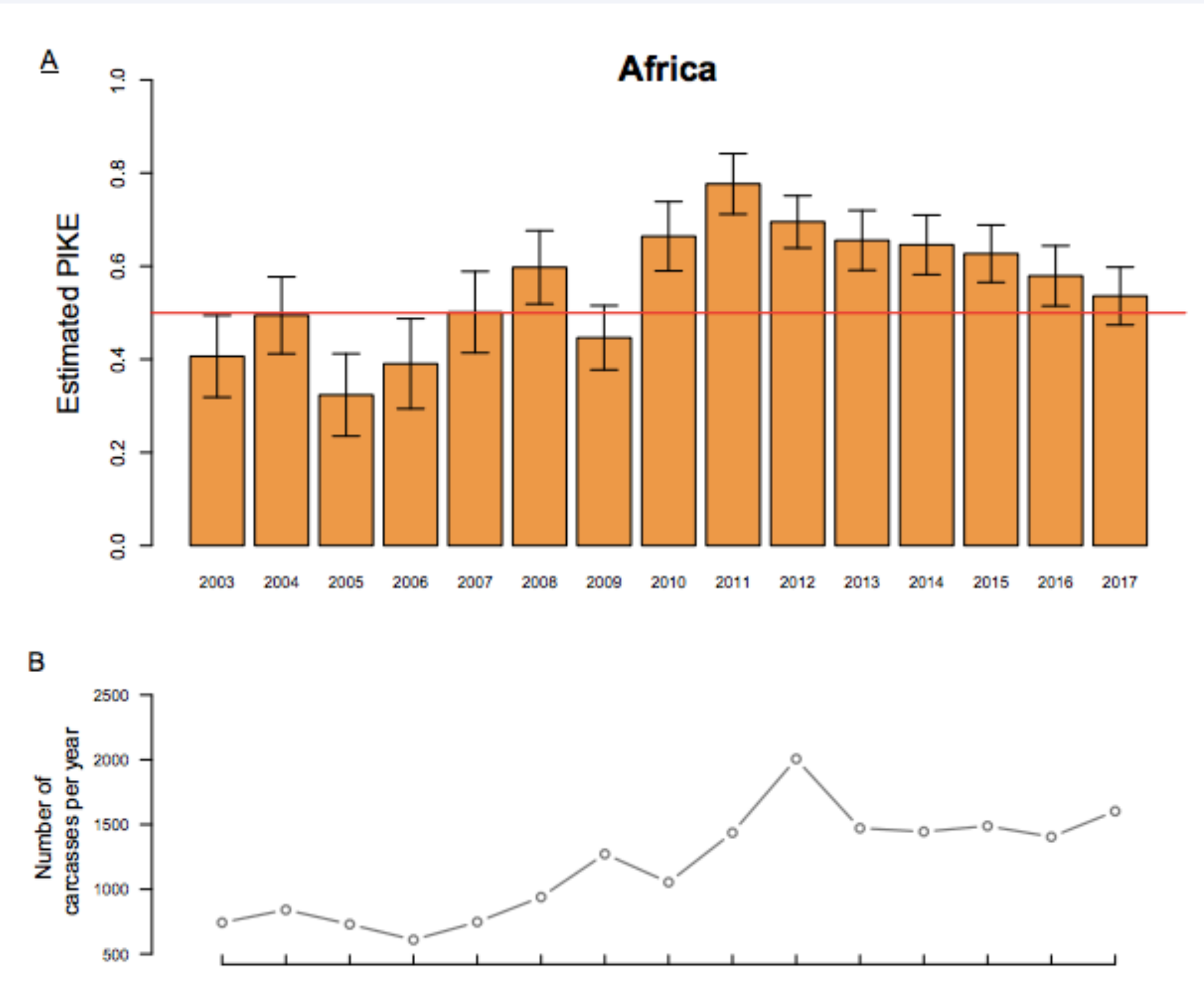
## Abstract

African and Asian elephants face many threats to their population numbers, including habitat loss, climate change, and interactions with humans. However, poaching and the illegal wildlife trade are the largest threats to these species. The first step in the illegal trade is taking or poaching of the elephant – typically the bulls with the largest tusks. Tusk ivory, whether African or Asian, is then exported to transit hubs in Asian countries. Final exported products, either carved or raw, enter the illegal markets located in many Asian countries and cities. Monitoring the Illegal Killing of Elephants (MIKE) and Proportion of Illegally Killed Elephants (PIKE) calculated that more elephant carcasses were found in 2011 than any other year, which resulted in more shipments of ivory leaving Africa and the price of ivory tripling in China. MIKE and PIKE data are analyzed in order to evaluate the crime of elephant poaching and its role in the illegal trade in endangered species.

### African Elephant Range Sites



### Asian Elephant Range Sites



### Species and Subspecies of Elephants

- African elephant (*Loxodonta africana*) – Vulnerable
- African savannah or bush elephant (*Loxodonta africana africana*)
- African forest elephant (*Loxodonta africana cyclotis*)
- Asian elephant (*Elephas maximus*) – Endangered
- Sumatran elephant (*Elephas maximus sumatrensis*)
- Indian elephant (*Elephas maximus indicus*)
- Sri Lankan elephant (*Elephas maximus maximus*)
- Borneo or Borneo Pygmy elephant (*Elephas maximus borneensis*)

### Threats to Elephants

- Habitat loss
- Deforestation
- Climate change
- Human-elephant interaction
- Wildlife trafficking and poaching
- Illegal trade

### How Poachers Hunt

- First, find and shoot elephant(s) with guns or arrows
- Next, track injured elephant as it runs for many meters
- “Hack out” ivory-filled tusks with tools, such as machetes or chainsaws
- Individuals partaking in this process are typically those involved with drug, gun, or human trafficking

### Stages in Wildlife Trafficking

- Stage 0: Preparatory activities
- Stage 1: Poaching, harvesting, and breeding of species
- Stages 2-4: Passage through local or regional intermediaries and markets or international traders
- Stage 5: Distribution of species
- Stage 6: Directly related to trafficking activity
- Species or parts of species then traded or exchanged to wholesalers and craftsmen

### CITES, MIKE, & PIKE

- The Convention on International Trade in Endangered Species of Wildlife Fauna and Flora (CITES) consists of 173 parties agreeing to conserve over 30,000 species of animals and plants
- Monitoring the Illegal Killing of Elephants (MIKE) and the Proportion of Illegally Killed Elephants (PIKE) are both programs created by CITES for the protection of elephants
- MIKE relays information to the CITES Secretariat in order to enhance management plans carried out by CITES’ Parties
- PIKE calculates the proportion of elephants found dead either from poaching or naturally

### Poaching and Markets

- Although an overall, international ban created by CITES in 1989 took place, very few parties abide to it
- Exporter countries are Democratic Republic of Congo, Cameroon, Gabon, Congo, and South Africa
- Raw ivory shipped to transit hubs, such as Thailand, Vietnam, Cambodia, Malaysia, and Laos
- Final destinations include China, Japan, Vietnam, Thailand, and U.S., where carved ivory is purchased
- Black markets are illegal and online markets in which consumers purchase carved ivory
- Gray markets are live auctions which may or may not be illegal

### Trends in Poaching

- Between 2010-2014 the price in ivory tripled in China due to more elephants poached and more ivory leaving Africa in 2011
- A possible reason for a sudden uprise in ivory exports could be a demand in China’s art and antique markets
- In all of Africa, 2005 was the lowest year of proportionally killed elephants, while 2011 was the highest
- If PIKE is above 0.5, then half of the elephants are assumed to have been illegally killed
- Central Africa contained the highest PIKE, with East and West Africa containing the lowest PIKE

