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Illegal wildlife trade continues to threaten African elephants



African elephants under threat

Photo: Supplied

Illegal killing for ivory continues to threaten African elephants. To help guide responses to the ongoing poaching, a [study](#) by the University of Cape Town (UCT) and Oxford University sought to uncover what might drive, facilitate, or motivate continent-wide poaching.

In the paper, published in the *Proceedings of the Royal Society* recently, the study found that the illegal killing of elephants is associated with poor national governance, low law enforcement capacity, low household wealth and health, and global elephant ivory prices. It further found that forest elephant populations suffered higher rates of illegal killing than savannah elephants.

The study, in which Dr Tim Kuiper and Professor Res Altwegg of the Centre for Statistics in Ecology, Environment and Conservation at the UCT Department of Statistical Sciences participated, found weak evidence that armed conflicts may increase the illegal killing of elephants, and no evidence for effects of site accessibility, vegetation density, elephant population density, precipitation, or site area.

Addressing wider systemic challenges of human development, corruption, and consumer demand would help reduce poaching, corroborating broader work highlighting these more ultimate drivers of the global illegal wildlife trade.

“We developed a model using 19 years of data on 10,286 illegally killed elephants detected at 64 sites in 30 African countries (2002-2020). These data were collected, mostly by wildlife rangers, as part of the global programme for Monitoring the Illegal Killing of Elephants (MIKE), administered by the Convention on the International Trade in Endangered Species (CITES). Our model linked these data on elephant killings to key socio-economic data related to the areas around the Parks, individual countries, and global markets,” says Kuiper.

Kuiper adds that poaching of high-value species like elephants and rhinoceros is driven primarily by sophisticated criminal syndicates.

“We used criminology theory and evidence from the scientific literature to generate hypotheses about factors that may drive, facilitate, or motivate the decisions of these syndicates and the local hunters they recruit. We then identified datasets representing these factors,” he says.

The illegal wildlife trade is one of the highest value illicit trade sectors globally, with thousands of wildlife species, worth billions of dollars, being poached, trafficked and sold annually. This is a major threat to biodiversity and ecosystems, which are the bedrock of human well-being as the recent multi-national UN Biodiversity Conference made clear.

African elephant populations have experienced significant declines (~30%) since 2006 due to consistently high rates of illegal killing. Apart from the loss of a culturally significant icon, elephant poaching results in lost tourism revenues for African countries, threatens the important role that elephants have as "ecosystem engineers" for healthy ecosystems, and results in both poachers and rangers losing their lives in a violent 'biodiversity war'. When elephants lose, we all lose.

Kuiper says: “The strong associations we found between poaching and factors like corruption and human development do not necessarily imply that these factors directly cause poaching, correlation does not imply causation. Deeper research into these associations at particular sites will help to see what underlying processes are at play, and better understand cause and effect. Furthermore, we could not test many plausible drivers of poaching due to a lack of comparable site-level data on things like changes in local political will, influxes of conservation funding, or socio-economic shocks.”

Professor E.J. Milner-Gulland from the University of Oxford remarked: “Although we cannot claim causality, we make some suggestions about what might lie behind the associations which we found, based on understanding from previous research studies. For example, a key finding was that having controlled for other factors, higher levels of

local human well-being in the areas around a Park was associated with lower poaching. One explanation could be that, in areas of economic deprivation, local residents may participate in illegal killing to meet their basic needs or earn extra income, in the absence of viable alternatives. Another interpretation might be that criminal ivory syndicates seeking to recruit local hunters target these areas because they are able to operate more effectively there for a range of possible reasons.”

Kuiper says although they found that sites with higher armed conflict intensity tended to have higher rates of poaching, the relationship was weak and was strongly influenced by data from just 2-3 high conflict sites. “We thus concluded that the positive conflict-poaching relationship in our model may not reflect a generalised driver of poaching, suggesting that the supposed strong links between armed conflict and the ivory trade may be over-stated,” he said.

The study suggests that tackling poaching requires dealing with the wider systemic challenges of human development, corruption, and consumer demand, and not just focussing on actions which would be traditionally defined as ‘wildlife conservation’.

- [Read the study.](#)
- [Access the photos.](#)

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