

Increasing value of ivory poses major threat to elephant populations

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A lone elephant. Credit: Monique Sosnowski

The global price of ivory increased tenfold since its 1989 trade ban by the Convention on the International Trade in Endangered Species (CITES), new research has found. The University of Bristol Veterinary

School study, published in *Biological Conservation* [25 July], is the first to analyse trends in global ivory market values since the ban came into effect.

Higher ivory market prices lead to higher poaching incentives, and therefore greater numbers of [elephants](#) being killed. Despite the CITES ban on ivory, poaching associated with its illegal trade has not prevented the suffering of elephants and is estimated to cause an eight per cent loss in the world's elephant population every year.

Using a large dataset of ivory prices collected between 1989 and 2017 from literature searches and visits to ivory markets across Africa, Europe and Asia, together with information such as ivory product type (raw, polished, carved), weight, region, and legality, the researchers were able to determine the factors that drive increases in ivory prices.

Since the ban, ivory has become an increasingly valuable commodity, with Asian markets having the highest prices and Africa the lowest. From the data, the researchers were able to determine that the global average price of ivory increased tenfold (~1,019 per cent) between 1989 and 2014 and appears to be slowly decreasing since. Factors that influence activity include where in the world the ivory was sold; whether the ivory had been carved or worked in any way; the legality of the sale; and finally, the total volume of ivory that was estimated to have been traded that year.



A herd of elephants. Credit: Monique Sosnowski

Monique Sosnowski, lead author who carried out the research at the Bristol Veterinary School as part of her MSc in Global Wildlife Health and Conservation, said: "With poachers killing an estimated 100 elephants of the remaining 350,000 each day, we believe our findings are significant to global wildlife conservation policy-making.

"Until now, very little has been known about global ivory prices since the international ban in 1989. We hope that a greater understanding of the factors that drive the price of ivory will lead to better informed policy interventions that lead to a more secure future for the long-term survival of elephants and other animals that suffer due to the ivory trade."

The researchers hope that by revealing these trends and the variables relevant to price determination, better decisions can be made with regards to global ivory policies. Understanding regional price trends and associated demand, together with knowing which factors influence market price, can inform conservationists, law enforcement, and policy makers on where to focus efforts on anti-trade campaigns, wildlife conservation, and education. For example, focusing limited resources on efforts to more heavily regulate trade in East Asia, where ivory demand, and thus the price, is highest, could decrease poaching and increase future security for elephants.



An elephant with giraffes. Credit: Monique Sosnowski

The next steps for the research team include incorporating their conclusions into bioeconomic models. Existing models could be modified with regional and historical price trends to improve their accuracy and then applied for global simulation studies to develop more effective policy design. This may add evidence to support decisions concerning the CITES ivory ban, national trade regulations, as well as to global [ivory](#) stockpile management.

A similar framework could also be applied to other [endangered species](#) experiencing poaching and [illegal trade](#) in their products, such as rhinos and tigers, to achieve new co-ordinated conservation efforts for global wildlife.

More information: Monique C. Sosnowski et al. Global ivory market prices since the 1989 CITES ban, *Biological Conservation* (2019). [DOI: 10.1016/j.biocon.2019.07.020](#)

Provided by University of Bristol

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