

Tackling the trade in illegal elephant ivory with modern statistical tools

Robert Burn and Dr Fiona Underwood

Summary

The Mathematics and Statistics department at the University of Reading has, over many years, developed and improved statistical tools to monitor the world trade in illicit ivory. This work now underpins the global protection of elephants under a United Nations convention on wildlife trade.

Background

The University of Reading has developed statistical methods and information systems for ETIS, the Elephant Trade Information System, which tracks seizures of illegal ivory trade made by law enforcement agencies across the world. This system provides evidence on global and regional trends in the illegal killing of elephants and the illicit ivory trade which is then used by TRAFFIC International, the wildlife trade monitoring network, and the Convention for International Trade in Endangered Species of Wild Fauna and Flora (CITES), the global regulatory body for international wildlife trade. Based on this work, CITES has introduced law enforcement interventions in over 20 countries in Africa, Asia and the Middle East aimed at curbing trade in illicit ivory.

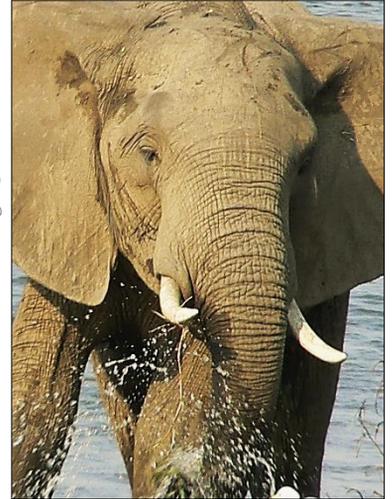
How is University of Reading research contributing?

The key statistical issue for ETIS is that it monitors and reports on covert and illegal processes, which cannot be monitored using standard statistical methods. When ETIS was first set up, the statistical methods required to analyse the data were not in place. Since 1997, Robert Burn (formerly of the Statistical Services Centre at the University of Reading) has been closely involved in developing monitoring systems to meet CITES requirements, and subsequently sat on various advisory bodies for ETIS. Since 2004, Dr Fiona Underwood has also been involved in these programmes. Their joint work resulted in a comprehensive report to CITES showing illegal ivory trade trends over 16 years to 2011, identifying key countries in the illicit trade and describing trade routes driving the trade.

What impact has our research had?

This report led directly to actions within specific countries to curtail the illegal trade in elephant ivory. As well as providing the underpinning data that has informed international policy on illicit trading of this threatened species, the evidence presented has also helped raise public awareness of the threats to elephants, as well as improving monitoring systems and increasing their reach.

Image © Fiona Underwood



“The impact of Reading University’s statisticians on the conservation world has been immense: thanks to their robust analysis, countries most implicated in the global illegal ivory trade have been identified and pressure publicly put on them to take action”.

Tom Milliken
Elephant & Rhino Programme Co-ordinator, TRAFFIC International

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