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Single criminal syndicate could be behind ivory poaching in east, southern Africa: Study

A new study published in Nature Human Behaviour makes use of genetic analysis of seized elephants tusks to reach new conclusions

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 The African Forest Elephant (Left) and the African Savanna Elephant (Right). Photo: Wikimedia Commons

A single transnational criminal network may be poaching elephants across southern and eastern Africa, a new study has claimed.

The criminals may be trying to shift base to the Democratic Republic of Congo (DRC) from east Africa, warned the report published February 14, 2022, in the journal *Nature Human Behaviour*.

Such criminal networks may be seeking to use porous borders of the DRC as well as the weak rule of law there to their advantage, the study said.

Scientists teamed up with detectives from from the United States Department of Homeland Security for genetic analysis of ivory seizures over 17 years.

The team analysed 4,320 savannah (*Loxodonta africana*) and forest (*Loxodonta cyclotis*) elephant tusks, selected from 49 large ivory seizures totalling 111 tonnes. These were shipped out of Africa between 2002 and 2019.

The team had, in 2018, found that tusks from the same elephant were separated and smuggled in different shipments.

This time however, the team worked to find genetic matches between tusks which showed that they were either from the same individual animal or from those related to it such as parents, calves or siblings.

This led the researchers to an important finding:

However, the concordance between physical and genetic evidence supports the suggestion that related elephants appear in related seizures.

Matching of tusks from close relatives found in separate seizures shows that most large ivory seizures made over the past decade or more resulted from repeated poaching of the same localised elephant populations.

They added that “the consistency of genetic matches among large numbers of shipments containerised in and transiting through the same African port implies that a very small number of transnational criminal organisations are responsible for the bulk of these shipments, even when shipments are containerised in separate nearby countries.”

The researchers noted that 77 per cent of the large ivory seizures they examined between 2002 and 2019 consisted of savannah elephant ivory, with an average weight of 2.24 tonne per seizure.

These savannah elephants came from the plains or bushlands of Tanzania, northern Mozambique and southern Kenya. A lot of the recent tusks also came from the Kavango-Zambezi Transfrontier Conservation Area of southern Africa.

Some 23 per cent of the ivory seized that was examined by the experts belonged to forest elephants, with an average weight of 2.86 tonne per seizure. Forest elephants are smaller than their bush relatives and found in and around the Congo basin of central Africa.

Most of the poached forest elephant ivory came from Gabon and Republic of the Congo.

The researchers’ work showed that three major transnational criminal organisations (TCOs) are operating in Africa in Mombasa, Kenya, Kampala, Uganda and Lomé, Togo.

As noted above, they also concluded that two of these three organisations may in fact be one single unit:

The TCOs operating in Mombasa, Kenya, and Kampala, Uganda, may in fact, represent a single large network as was suggested by a report based on over 400 contacts from the Uganda TCO's phones, covering many countries and continents, most notably in East Africa and Southeast Asia.

The researchers had a number of suggestions and recommendations.

They noted that "tusk matching between shipments was a powerful tool to link multiple shipments to the same TCO."

The researchers admitted that genetic matches were "limited by sample access". But they added that "the composite of genetic matches among representatively sampled seizures provides a basis to strengthen investigations and prosecutions."

They said "the connections made by combining geographic assignment, genetic matching and shared physical evidence among large ivory seizures can greatly empower investigations and prosecutions."

The authors also noted that the laxity of criminal justice systems across Africa and southeast Asia. Instead "of acknowledging linkages of TCOs to numerous transnational shipments, these cases are treated as a simple possession crime," they said.

The genetic analysis method could also be used in the increasingly diversified scenarios in which products are illegally smuggled, the researchers suggested.

It could, for instance, be used in cases where ivory, timber and pangolin scales are smuggled together.