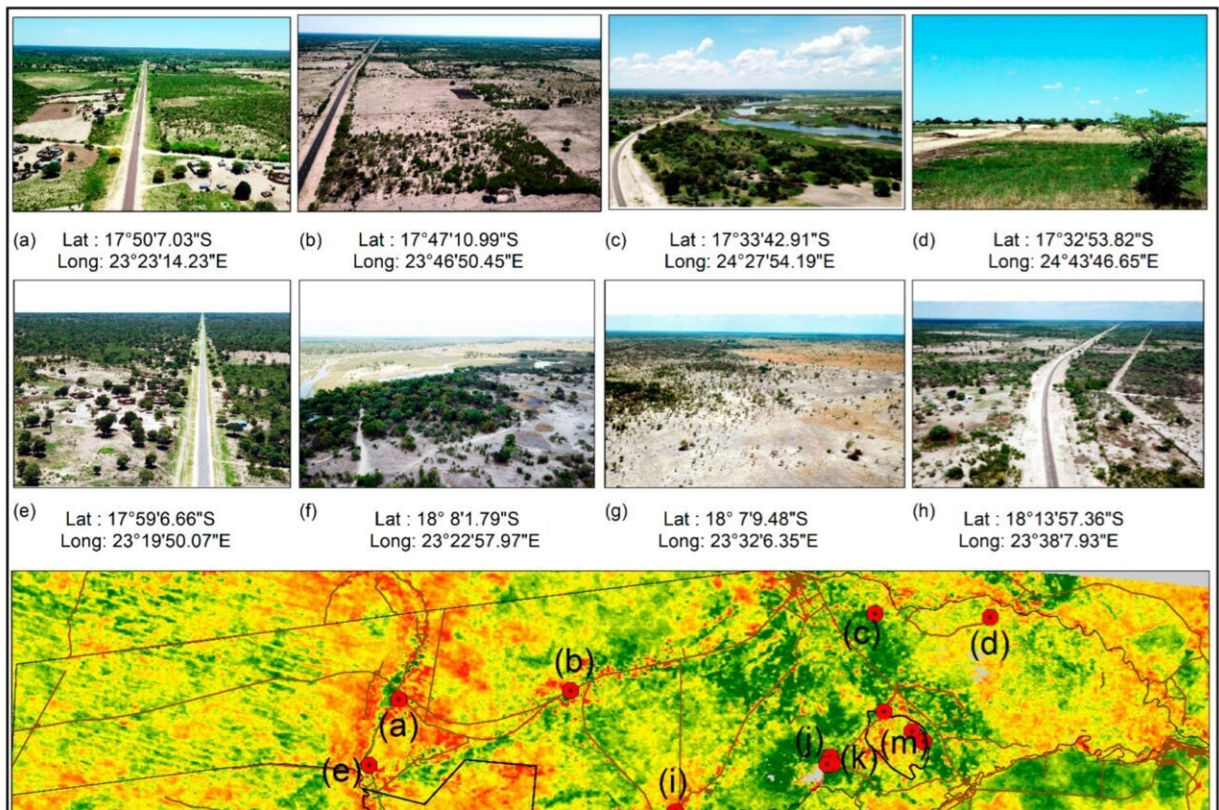


Vegetation declining on elephants' migration routes in Namibia

June 27 2022



Aerial images from our 2019 field survey in the Zambezi region (a–m). In (A), the labels (a–m) correspond to the images shown with their respective GPS coordinates at the sample locations (red circle with black dot in the middle). Additionally, in (A), we use the same ensemble as in Figure 2b for reference purposes. Credit: *Sensors* (2022). DOI: 10.3390/s22114006

A study based on extensive remote sensing data indicates that vegetation near the migration routes of elephants in Namibia has decreased. Human habitation and fences as well as artificial obstacles of other kinds affect the movements of wild animals, helping to accelerate the decline in vegetation. Meanwhile, increases in plant life were observed in areas where intensive farming and cattle grazing were practiced.

Researchers at the University of Eastern Finland and the University of Namibia used diverse remote sensing data to ascertain how elephants and other large herbivorous mammals affect vegetation and its structure in the Zambezi area in Namibia in 2002–2021. The study also evaluated the effects of human activity on vegetation and the movements of wild animals. The study was published in the scientific journal *Sensors*.

About 12,000 elephants now live in the Zambezi area. The number has increased nearly tenfold since 1989 when the size of the elephant population was less than 1,500 individuals. The study showed that the reduction of vegetation was greatest in areas with large elephant populations. Vegetation was affected most in the elephants' migration corridors in [national parks](#) and nature reserves.

"A deeper understanding of how wild animals affect the vegetation offers tools for improving the management of [wild animals](#) and natural resources," says Professor Alfred Colpaert of the University of Eastern Finland.

Among other things, the study utilized MOJDIS [satellite data](#), which is applicable for the examination of changes in the soil over a long period of time. More advanced geospatial methods were used in the analysis the time series materials which made it possible to distinguish between the degeneration of soil caused by [human action](#) and that which is caused by natural climatic factors.

More information: Augustine-Moses Gaavwase Gbagir et al, Assessing the Impact of Wildlife on Vegetation Cover Change, Northeast Namibia, Based on MODIS Satellite Imagery (2002–2021), *Sensors* (2022). [DOI: 10.3390/s22114006](https://doi.org/10.3390/s22114006)

Provided by University of Eastern Finland

Citation: Vegetation declining on elephants' migration routes in Namibia (2022, June 27) retrieved 24 April 2024 from <https://phys.org/news/2022-06-vegetation-declining-elephants-migration-routes.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.