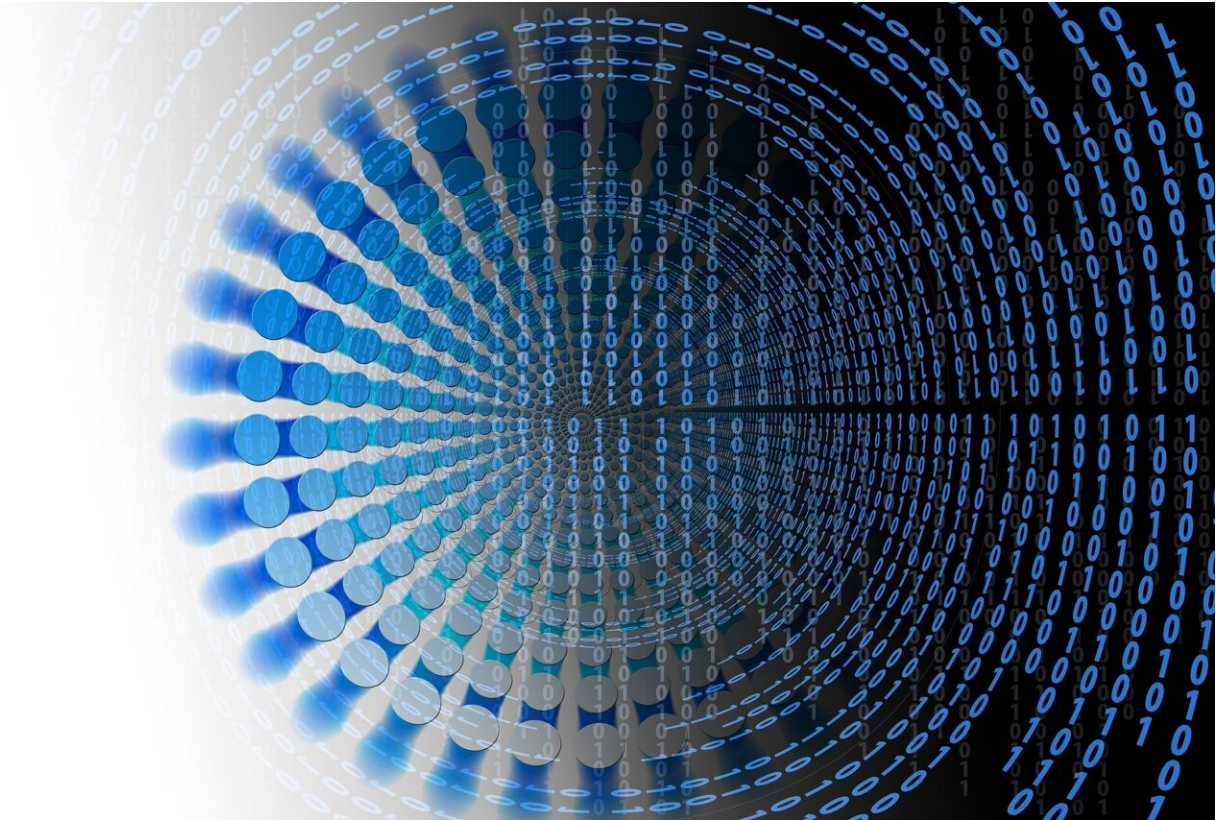


New database to support conservation

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Scientists have created a new tool to fill the large gaps in our understanding of where and how human activities threaten wild species around the world.

Conservation experts revealed large gaps in available evidence among

different locations, threats, and taxonomic groups. This study found that 75% of threat maps were produced at a national scale or below. This means that a large volume of evidence has potentially been overlooked when basing our understanding of global threats on maps produced on a global scale.

To address this issue, they created [searchable database](#) that allows anyone to easily access the studies found. The database presents a [valuable tool](#) for planning conservation actions at any spatial scale and preventing species extinctions globally. This represents a large volume of literature that captures a wide variety of threats such as the collection of medicinal plants, hunting, pollution, and alien invasive species, that are particularly difficult to account for in global datasets. The database allows [decision-makers](#) at local and national scales to quickly and easily access evidence relevant to them.

Published in the journal *Environmental Evidence*, the study was led by Francesca Ridley, a Ph.D. researcher at Newcastle University. It involved a rigorous search and screening of over 14,000 articles, looking for maps of where threatening human activities come into contact with [wild species](#) of animals and plants around the world.

Lead author, Francesca Ridley, of Newcastle University's School of Natural and Environmental Sciences, said: "The findings have important implications for how conservation actions are planned to reduce the rate of species extinctions.

"With the second part of UN Biodiversity COP15 and the finalization of the Post-2020 Biodiversity framework looming, there is an urgent need to consolidate what we understand about where and how human activities threaten species with extinction. In this pursuit, this research is an important step forward.

"Previous attempts to observe the global distribution of threats to species have relied on globally available data that don't account for the knowledge gained from local-scale studies and don't represent the full scope of human activities that can threaten species across terrestrial, freshwater, and marine realms. This study reinforces the need to use the findings of smaller-scale studies to inform our broader understanding of where [species](#) are directly at risk."

This study also observed biases in sampling. For example, studies on animals were three times more numerous and more taxonomically specific than studies on plants. There were also twice as many studies on the terrestrial realm as on both aquatic realms (freshwater and marine) together. Such sampling biases can distort our understanding of what actions and areas to prioritize.

Francesca added that "further critical appraisal and extraction of the magnitude of threats for each study are necessary to translate the evidence into threat reduction activities. Reproducing the analyses for non-English languages and making further efforts to identify gray literature could also fill some of the gaps in threat mapping found. Therefore, the systematic map and corresponding database of articles presents a valuable starting point for evidence-based decision-making for [threat](#) reduction at local and national scales."

More information: Francesca A. Ridley et al, The scope and extent of literature that maps threats to species globally: a systematic map, *Environmental Evidence* (2022). [DOI: 10.1186/s13750-022-00279-7](https://doi.org/10.1186/s13750-022-00279-7)

Provided by Newcastle University

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