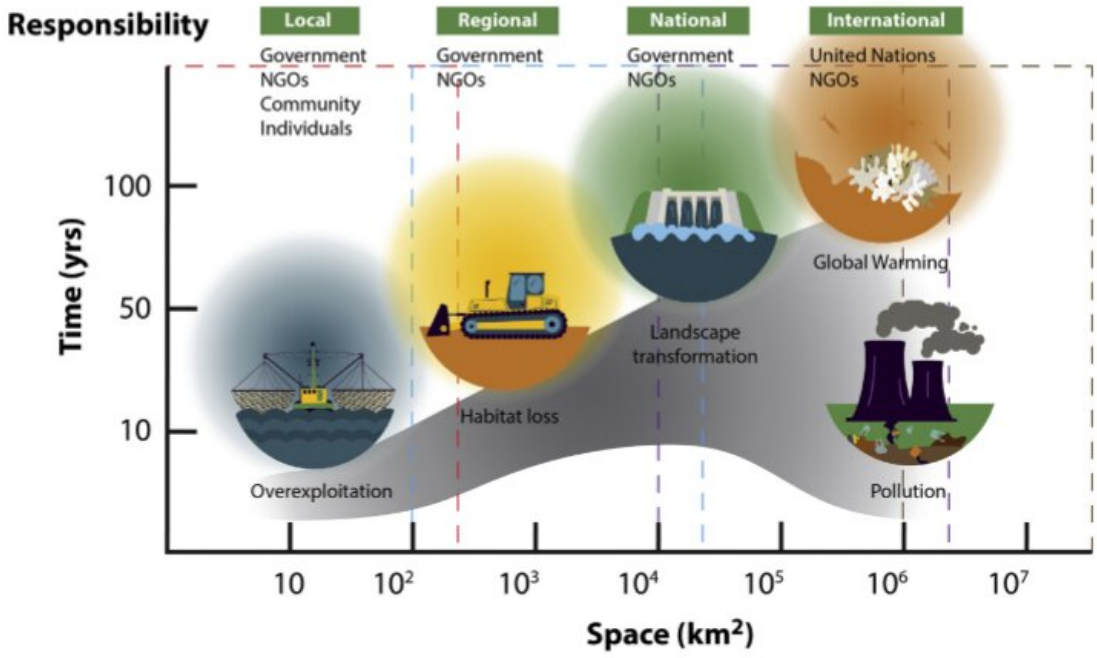
Conservation goals compete at the expense of biodiversity

May 23 2019



This image conceptualizes multiple threats to biodiversity across different time and space scales. Credit: Bonebrake et al./Trends in Ecology & Evolution

With an ever-growing list of threats facing biodiversity on multiple scales, conservationists struggle to determine which to address. A common reaction is to prioritize their efforts on threats to individual species or management areas, but researchers say this narrow-minded approach is detrimental to the overall goal of saving species and

ecosystems worldwide. Instead, in an article published May 23 in the journal *Trends in Ecology & Evolution*, they say large-scale, long-term collaboration is the answer.

"We are in a pivotal moment when we cannot just protect species from immediate and localized threats," says Louise Ashton, Assistant Professor in the School of Biological Sciences at the University of Hong Kong, "We also need to prepare for future threats and protect against threats that function at large spatial scales."

However, the limited resources available in conservation disciplines hinders the ability for broader collaboration with other scientists as well as between local, regional, and international agencies. In fact, it is not uncommon that due to limited resources, conservation biologists must downplay the importance of other research to secure funding for their own.

The authors warn that this lack of collaboration is of particular concern as interactions between local and global-scaled threats, when left unacknowledged, can combine and become much more difficult to manage. In coral reefs, for example, the reef's health may be reduced by local stressors like nutrient run-off from agriculture or localized overfishing. Then, when global stressors come in to play, like ocean warming and acidification, the result is more devastating than what would be observed in a healthy reef. Such cascading effects, the authors say, could be better prevented by multi-regional, coordinated conservation efforts.

"To get away from the compartmentalized approach to conservation, we need to re-evaluate funding and publishing models to find ways to encourage integrative research that considers current and future threats," says Timothy Bonebrake, an Associate Professor also in the School of Biological Sciences at the University of Hong Kong. "This means

involving social scientists, local stakeholders, and political leaders as well."

Although climate change is center stage as the current worldwide threat to biodiversity, other challenges of equal magnitude are looming on the horizon. Hazards like nitrogen pollution and the impacts of soil microplastic residues top that list, the authors write.

"Ultimately, if we can aim for win-win conservation interventions, which mitigate the impacts of multiple threats, then it doesn't matter which threat is perceived to be the biggest," says Ashton.

More information: *Trends in Ecology and Evolution*, Bonebrake et al.: "Integrating Proximal and Horizon Threats to Biodiversity for Conservation" www.cell.com/trends/ecology-ev … 0169-5347(19)30104-1 , DOI: 10.1016/j.tree.2019.04.001

Provided by Cell Press

Citation: Conservation goals compete at the expense of biodiversity (2019, May 23) retrieved 20 March 2024 from https://phys.org/news/2019-05-goals-expense-biodiversity.html