

Scientists urge quick, deep, sweeping changes to halt and reverse dangerous biodiversity loss

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Halting, then reversing the dangerous, ongoing loss of Earth's plant and animal diversity requires far more than an expanded global system of

protected areas of land and seas, scientists warned today.

Needed is successful, coordinated action across a diverse, interconnected set of "transformative" changes, including massive reductions in harmful agricultural and fishing subsidies, deep reductions in overconsumption, and holding [climate change](#) to 1.5°C.

More than 50 scientists from 23 countries today delivered to governments a synthesis of the science informing and underpinning 21 targets proposed in the [draft 'post-2020 Global Biodiversity Framework'](#) being negotiated under the UN Convention on Biological Diversity (CBD) and scheduled for adoption later this year at a world [biodiversity](#) summit in China.

The analysis was coordinated by two renowned international science bodies: bioDISCOVERY, a program of the Future Earth organization, and the Group on Earth Observations Biodiversity Observation Network (GEO BON).

Says Paul Leadley, an assessment leader, past chair of bioDISCOVERY, and Professor at Paris-Saclay University, France: "The target of protecting 30% of all land and seas is important and attracting a lot of attention. And expanding protected areas is a good start if done well, but far short of what's needed to halt and reverse biodiversity loss—called 'bending the curve' for biodiversity'. There's very good evidence that we will fail again to meet ambitious international biodiversity objectives if there's too much focus on protected areas at the expense of other urgent actions addressing the threats to biodiversity."

"Governments are clearly struggling with the breadth and depth of the 'transformative changes' needed to bend the curve for biodiversity, and sometimes seem unwilling to face up to it. But deep changes are necessary and will greatly benefit people in the long run."

The essential point, says bioDISCOVERY co-Chair Lynne Shannon, a Professor at the University of Cape Town, South Africa, is that "there is no one-to-one linkage from any action target to a specific milestone or goal; instead, 'many-to-many' relationships exist among them. We need to recognize, therefore, the complex relationships among targets, milestones and goals and undertake our planning and actions in an integrated manner."

Among the group's key conclusions and recommendations:

- *Success requires transformative change.* Past experience in slowing and reversing biodiversity loss as well as scenarios of future biodiversity change show that only a comprehensive portfolio of interrelated actions will significantly reduce direct threats to biodiversity from land and sea use change, direct exploitation of organisms, climate change, pollution, and invasive alien species. None of the GBF targets that address these direct threats to biodiversity will alone contribute more than 15% of what's needed to reach the world's ultimate goals for ecosystems, species and genetic diversity.
- *Action must be coordinated at every scale, with progress assessed frequently.* The degree of biodiversity change, and the relative importance of drivers, vary greatly across scales and from place to place, and drivers in one place can affect biodiversity in other places far away ("telecoupling," e.g. through global trade, climate change, etc). Success will require action coordinated across local, national and international levels, in natural and managed ecosystems, and across intact and 'working' lands and seas. Success will also require upgrading monitoring capability and regular assessment of progress to make sure actions are delivering the intended outcomes at all levels.
- *Substantial investment in better monitoring is needed to guide effective action.* There are massive gaps in biodiversity

monitoring. Most of the nearly 1 billion existing non-marine biodiversity-related records were collected in developed countries and within 2.5 km of roads, and less than 7% of the globe is sampled. Two key improvements needed: a) a global monitoring system for biodiversity with the ability to attribute biodiversity change to specific drivers, and to integrate data from relevant threat sectors (e.g. agriculture, trade, climate); and b) a predictive capacity to anticipate future trends, to inform decision-making.

- *Act now, and sustain it to ensure recovery.* Given that the time lags between action and outcomes are often measured in decades, especially in such areas as restoration of forests, coral reefs and fisheries, it's imperative to act now to avoid irreversible loss and put biodiversity on a pathway to recovery by mid-century.

Says co-author Maria Cecilia Londoño Murcia of the Humboldt Institute, Colombia: "The sooner we act the better. Time lags between action and positive outcomes for biodiversity can take decades so we must act immediately and sustain our efforts if we are to reach the global goals by 2050. The time needed for safeguarding and restoring ecosystem structure, function and resilience is particularly critical for people and communities whose livelihoods and well-being directly depend on these systems and the benefits they provide."

Adds co-author David Obura, a distinguished scientist at the Coastal Oceans Research and Development (CORDIO), Kenya: "High levels of ambition for halting and reversing biodiversity loss will be critical. We underline, however, that this cannot be achieved just by conventional conservation actions".

"We show that the 21 Targets of the Global Biodiversity Framework essentially cover this broad gamut of indirect and direct drivers, but that no one Target can be implemented as a priority over the others to

achieve success (other than providing the financial and other means necessary to implement all targets)."

Provided by Group on Earth Observations Biodiversity Observation Network

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