

Biodiversity Crisis Affects Billions Who Rely on Wild Species, Researchers Say

The latest global assessment of the decline in plant and animal life found some bright spots but recommended significant changes to hunting and other practices to address the risks.

By Elena Shao

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Billions of people worldwide rely on some 50,000 wild species for food, energy, medicine and income, according to a sweeping new scientific report that concluded humans must make dramatic changes to hunting and other practices to address an accelerating biodiversity crisis.

The report, prepared for the United Nations over four years by 85 experts from 33 countries, is the most comprehensive look yet at the pathways for using wild species sustainably, or in ways that do not lead to the long-term decline of those resources and ensures their availability for future generations. It draws upon thousands of scientific studies and other references, including a body of Indigenous and local knowledge. Indigenous and poor communities are among the most immediately affected by overuse of wild species, the report said.

“Half of humanity benefits from and makes use of wild species, and often without even knowing that they’re doing so,” said Marla R. Emery, one of the co-chairs of the assessment, which was conducted by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. A summary was approved Thursday in Bonn, Germany, by representatives from 139 countries, including the United States, with the full report set for publication in a few months.

The new assessment builds on an exhaustive 2019 report from the same group that concluded that humans had altered the natural world so drastically that one million plant and animal species were at risk of extinction. A year later, another United Nations report declared that nations had made little progress on international commitments, made in 2010, to tackle catastrophic biodiversity collapse.

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Yet the focus of this latest assessment was to provide a more optimistic outlook on how wild species can be sustainably used by people around the world, said Jean-Marc Fromentin, also one of the co-chairs.

One-third of the wild species that humans use in some way, and which also appear on the “red list” — those listed as threatened by the International Union for Conservation of Nature — experienced stable or increasing population trends despite human use, according to one study cited in the report. This suggests that “the use of these specific species is not yet directly contributing to their extinction, as far as we can tell,” said Sophie Marsh, a biodiversity master’s student at the University College London and lead author of the study on threatened species, which was published in 2021.

Indigenous and local knowledge is crucial to learning some of the best practices for sustainable use, the report said, but traditionally it has been underused. Indigenous communities have long incorporated sustainable uses of wild species in their cultural practices, and an estimated 15 percent of global forests are managed as “community resources,” the report said, by Indigenous peoples and local communities.

The report was referring to practices like those used in the hills of the Cordillera region of Luzon, the largest island in the Philippines. There, “the entire community mobilizes to protect the forest,” said Victoria Tauli-Corpuz, an Indigenous rights activist who grew up in the region. The practice is called Batangan, a resource management system that involves a shared sense of responsibility for monitoring the diversity of the forests and planting new trees as the older ones age.

It's not just about the trees, "it's about the water, the plants and the animals, the microorganisms," and increasingly, it's about climate change as forests play a critical role in sequestering carbon, Ms. Tauli-Corpuz said.

The sustainable use of wild species is central to the identity and existence of many Indigenous and local communities, the report said.

"If wildlife disappears, our culture is at risk, our lifestyle and our livelihood is at risk," said Viviana Figueroa, an Argentine Indigenous lawyer and activist who participated in dialogues with the report authors as a part of her involvement with the International Indigenous Forum on Biodiversity. "There is still a lot of work to be done, but at least there is some recognition," Ms. Figueroa said.

Future policies governing the use of wild species will need to take into account the social and historical dimensions of sustainability, and whether the benefits from that use are distributed fairly. For example, vicuña fibers, found in luxury garments, are highly priced and produced by mostly low-income Indigenous communities in South America that contribute to vicuña conservation by allowing the animals to graze on their communal or private land.

Yet, it is "almost impossible" for a remote Andean community to negotiate with an international textile company or to place their product on the international market, the report said, meaning that most of the profits from the trade in vicuña fibers are captured by traders and textile companies.

The fishing industry will need to reduce unregulated and illegal fishing, support more small-scale fisheries and suppress harmful subsidies that encourage overfishing, the report recommended. The logging industry will also need to invest in technology that reduces waste in the manufacturing of wood products, according to the report's conclusions, and governments may need to increase bans or regulations on wild meat in some regions, at the same time assessing whether those policies might affect food insecurity in those areas.

The findings from the new report may soon have a direct effect on international policy. The report was in part conducted at the request of Convention on International Trade in Endangered Species of Wild Fauna and Flora, a treaty meant to ensure that the global trade in plants and animals does not imperil their survival in the wild. The parties to the treaty will use the findings from the assessment to inform their decisions surrounding trade at their conference in Panama in November.

The overexploitation of wild species isn't the only factor driving the decline; human-caused climate change is also a major force, the report said. Growing human populations and consumption, along with technological advances that make many extractive practices more efficient, will also put greater pressures on wild species.

“We have to make sure these policy instruments benefit everybody,” said Emma Archer, a professor at the University of Pretoria in South Africa and one of the assessment’s lead authors. “There doesn’t have to be both winners and losers.”