A million species threatened with extinction, UN-backed report warns

By Daniel de Vries
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The Earth’s natural system is deteriorating at an unprecedented rate and poses an urgent threat to humanity, a group of leading scientists warned last week in a release of the most comprehensive assessment of global biodiversity ever conducted. Existing policy responses are grossly inadequate and nothing short of “transformative changes” can stop the accelerating obliteration of nature, the assessment found.

Around a million species—perhaps an eighth of all plant and animal species on Earth—are in danger of going extinct, many within a matter of decades, according the report from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

While there have been five previous mass extinctions during the 3.5-billion-year history of life on Earth, the die-off of biodiversity over the past 50 years is not only unprecedented in the existence of humanity, it is caused by our species.

“The overwhelming evidence of the IPBES Global Assessment, from a wide range of different fields of knowledge, presents an ominous picture,” Robert Watson, the group’s chairperson, explained last week at the public release of the summary report. “The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.”

IPBES, like the parallel effort on global warming by the Intergovernmental Panel on Climate Change (IPCC), is convened under the auspices of the United Nations to assess the current state of knowledge of the environmental crisis and to explore the connections with economic development pathways. The report is the product of 145 leading experts from around the globe, reviewing around 15,000 scientific studies as well as information from indigenous peoples. It is the first comprehensive look at biodiversity loss since 2005.

The statistics assembled by these experts reveal the extent of the crisis. Three-quarters of land environments and two-thirds of marine environments have been “severely altered,” the report found. A staggering 85 percent of wetlands that existed in the pre-industrial era have been wiped out. Around a third of forest areas have also disappeared.

The widespread alteration of land and sea, along with direct exploitation, are the leading drivers of the spectacular collapse in entire groups of species. More than 40 percent of amphibians are in danger of extinction. A third of all corals and sharks may disappear in the coming decades.

“Ecosystems, species, wild populations, local varieties and breeds of domesticated plants and animals are shrinking, deteriorating or vanishing. The essential, interconnected web of life on Earth is getting smaller and increasingly frayed,” German biologist and report co-chair Josef Settele said.

Climate change is also a major factor in the destruction of nature, and one that is expected to worsen as temperatures rise further. Warming alone is estimated to threaten approximately 5 percent of species with extinction at a 2 degrees Celsius increase—a threshold the world is on course to surpass within a few decades. If temperatures rise 4.3 degrees, 16 percent of all species may be at risk of climate-related extinction.

Avoiding the worst impacts of global climate change, in turn, also depends on maintaining healthy natural systems. “Marine and terrestrial ecosystems are the
sole sinks for anthropogenic carbon emissions, with a gross sequestration of 5.6 gigatons of carbon per year (the equivalent of some 60 per cent of global anthropogenic emissions),” the report notes.

The destruction of nature has already brought severe consequences to humanity. “Nature plays a critical role in providing food and feed, energy, medicines and genetic resources and a variety of materials fundamental for people’s physical well-being and for maintaining culture,” the report states. More than 800 million people in Africa and Asia are threatened with hunger, while a full 40 percent of the globe lacks access to clean drinking water.

The loss of nature and its ability to support these life-sustaining functions are projected to worsen under most economic and social scenarios assessed in the report.

Much of the discourse about biodiversity loss and species extinction has centered around human population growth. The world’s population has more than doubled since 1970, creating additional demands for food and resources. While the authors identified this growth as a key “indirect driver,” they also make clear that even with continued moderate increase in population, “nature can be conserved, restored and used sustainably.”

In contrast, the report points to a variety of unsustainable production practices and economic policies, including an estimated $100 billion in agricultural subsidies in the advanced capitalist countries that may directly harm the environment. The irrational management of marine resources has led to a third of fish stocks being harvested at unsustainable levels, with another 60 percent “maximally sustainable fished.” On land, harmful practices and land use decisions have resulted in the degradation of 23 percent of the global land area.

What is necessary is not a few enlightened policy initiatives, however. The report makes a clear call for “transformative change,” that is, “fundamental, system-wide reorganization across technological, economic and social factors.” What is lacking is not the knowledge or technological capability to implement these changes, but the necessary social initiative.

“By its very nature,” Robert Watson of IPBES said, “transformative change can expect opposition from those with interests vested in the status quo, but also …