

Earth is a "living planet" and all life depends on one another to thrive, report says

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Burchell's zebras and Masai giraffe seen in Masai Mara National Reserve, Kenya. Photo by: Anup Shah/Getty Images

You might not be aware of endangered animals or plants, but the globe's biodiversity crisis threatens all of humanity. The threats come in numerous unseen or unrecognized ways, scientists say.

Biodiversity refers to the variety of living things in an environment, whether it's a forest, a stream or an ocean.

1 Million Species Threatened

A big report released on May 6 warned that nature is in trouble and estimated that 1 million species are threatened with extinction if nothing is done. It said the worldwide deterioration of nature is everyone's problem. The report was done by the United Nations, an organization of countries that work together to promote international cooperation.

"Nature is essential for human existence and good quality of life," the report said.

Food, energy, medicine, water, protection from storms and floods and slowing climate change are some of the 18 ways nature helps keep people alive, the report said. It concluded that 14 of those are on long-term declining trends.

"You destroy nature and it's going to bite you back," said Stuart Pimm, an ecology professor at Duke University in North Carolina. He pointed to how difficult it has been for China to come back from decades of forest loss. The country has replanted trees in recent years.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services report points to more than 2,500 wars and other conflicts over fossil fuels, water, food and land. It illustrates how important nature is to people.

Diversity Of The Living

"Protecting biodiversity means protecting mankind because we human beings depend fundamentally on the diversity of the living," said Audrey Azoulay. She is the UNESCO Director-General. She announced the report in Paris, France. UNESCO is short for the United Nations Educational, Scientific and Cultural Organization.

Here are four ways humanity depends on nature, based on information from the report and scientists.

Nearly all food comes directly from nature, said report co-author Kai Chan. He is an environmental scientist at the University of British Columbia in Canada. Even though overall the world is growing more food, pressure on crops from pollution, habitat changes and other forces has made prices soar, he said. Problems have even caused food riots in Latin America, he said.

Bees and other pollinators across the globe are in decline. Almost 75 percent of the world's food crops, including fruits, vegetables, coffee and cocoa, require pollination. The report said pollinator loss could cost the world \$285 billion to \$577 billion a year.

Nature Underpins Human Health

About 70 percent of the drugs used to fight cancer are natural or are products inspired by nature, the report said. About 4 billion people rely primarily on natural medicines. There are around 7.5 billion people in the world.

Thomas Lovejoy is a scientist at George Mason University in Virginia. He points to a single microbe, a tiny living thing in Yellowstone National Park's hot springs. The park is in Idaho, Montana and Wyoming. Pieces of the microbe's genetic code are the key to a scientific technique called polymerase chain reaction. It is used for medical, genetic and other tests and a lot of modern biotechnology.

"Nature underpins all dimensions of human health," the report said.

Vulnerability To Climate Change And Weather

Without forests and oceans, Earth would be warming more and faster, scientists said.

The world's forests and oceans take nearly 6.2 billion tons of heat-trapping carbon dioxide out of the air each year, the report said. That's about 60 percent of what humans produce through burning fossil fuels.

Climate change and biodiversity loss are equally huge environmental problems, report chairman Robert Watson said. They make each other worse, he said.

People can build expensive sea walls to fight the rise of oceans from climate change. The same protection can be offered by coastal mangroves, the report said.

They are trees or shrubs that grow in coastal swamps and can form dense thickets. However, mangroves are in trouble, Watson said.

"They often act as a nursery for fisheries basically," Watson said. "And they clearly help to protect land from severe weather events and storm surges from the sea."

The problem, he said, is that many mangrove systems have been converted to shrimp farms. That leaves the land in more danger from storms and without biodiversity.

Humans Are Not Independent From Nature

People may think of biodiversity or endangered species as something removed from their daily lives. However, those people don't understand that Earth works as a "living planet" with many parts dependent on each other, Lovejoy said.

"We're here in Paris. Can you experience Paris without nature?" asked report co-chairman Eduardo Brondizio of Indiana University. "Every place we turn here we see biodiversity exposed to us in the streets. When we open the tap here, we drink excellent water. When we look at the parks, when we look at the atmosphere here in the city, it's all about nature."