

# The World Is Not Enough for Humans

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Humanity's environmental impact has reached an unprecedented scope, and it's getting worse. Since 1987 annual emissions of carbon dioxide-the leading greenhouse gas warming the globe-have risen by a third, global fishing yields have declined by 10.6 million metric tons and the amount of land required to sustain humanity has swelled to more than 54 acres (22 hectares) per person. Yet, Earth can provide only roughly 39 acres (15 hectares) for every person living today, according to the United Nation's Environmental Program's (UNEP) Global Environment Outlook, released this week.

"There are no major issues," the report's authors write of the period since their first report in 1987, "for which the foreseeable trends are favorable." Despite some successes-such as the Montreal Protocol's 95 percent reduction in chemicals that damage the atmosphere's ozone layer and a rise in protected reserves of habitat to cover 12 percent of the planet-humanity's impact continues to grow. For example: Biodiversity- The planet is in the grips of the sixth great extinction in its 4.5-billion- year history, this one largely man-made. Species are becoming extinct 100 times faster than the average rate in the fossil record. More than 30 percent of amphibians, 12 percent of birds and 23 percent of our own class, mammals, are threatened.

Climate-Average temperatures have climbed 1.4 degrees Fahrenheit (0.76 degree Celsius) over the past century and could increase as much as 8.1 degrees F (4.5 degrees C) over the next unless "drastic" steps are taken to reduce greenhouse gas emissions from, primarily, burning fossil fuels. Developed countries will need to reduce this globe-warming pollution by 60 to 80 percent by mid-century to stave off dire consequences, the report warns.

"Fundamental changes in social and economic structures, including lifestyle changes, are crucial if rapid progress is to be achieved." Food-The amount of food grown per acre has reached one metric ton, but such increasing intensity is also driving rapid desertification of formerly arable land as well as reliance on chemical pesticides and fertilizers. In fact, four billion out of the world's 6.5 billion people could not get enough food to eat without such fertilization. Continuing population growth paired with a shift toward eating more meat leads the UNEP to predict that food demand may more than triple.

Water-One in 10 of the world's major rivers, including the Colorado and the Rio Grande in the U.S., fail to reach the sea for at least part of the year, due to demand for water. And that demand is rising; by 2025, the report predicts, demand for fresh water will rise by 50 percent in the developing world and 18 percent in industrialized countries. At the same time, human activity is polluting existing fresh waters with everything from fertilizer runoff to pharmaceuticals and climate change is shrinking the glaciers that provide drinking water for nearly one third of humanity. "The escalating burden of water demand," the report says, "will become intolerable in water-scarce countries."

The authors-388 scientists reviewed by roughly 1,000 of their peers-view the report as "an urgent call for

action" and decry the "woefully inadequate" global response to problems such as climate change. "The amount of resources needed to sustain [humanity] exceeds what is available," the report declares.

"The systematic destruction of the earth's natural and nature-based resources has reached a point where the economic viability of economies is being challenged," Achim Steiner, UNEP's executive director, said in a statement.

"The bill we hand our children may prove impossible to pay."

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