

# 11,000+ Scientists Declare Climate Emergency

Humanity has its work cut out for it.

By [Caroline Delbert](#) Nov 5, 2019



IAN WALDIE / GETTY IMAGES

- A paper signed by more than 11,000 scientists lists specific concerns adding up to a “climate emergency.”
- Scientists cite signs of hope, including climate protests around the world this year.
- The emergency declaration is backed by analysis of 40 years of global climate data.

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More than 11,000 scientists have signed onto a scholarly paper describing a “climate emergency.” In the paper, ecological researcher William Ripple, of Oregon State University’s College of Forestry, leads a team that describes the factors that make up the emergency, from per capita meat consumption to rates of passenger flight around the world.

This isn't Ripple's first foray into the climate spotlight. His research focuses on trophic cascade, which is the domino effect of habitat loss and ecological crisis caused by changes in the numbers of predators and prey within a food chain. If there are too many predators, the dwindling number of prey animals in turn has ramifications for flora, which then affects soil cover, ground water, and more.

In 2017, Ripple published a paper similar to the one out now, a massively endorsed climate study called "World Scientists' Warning to Humanity." That paper was a spiritual sequel to a 1992 report on the escalating natural resource and habitat crisis at the time. (The original was signed by over 1,500 scientists. We've come a long way.)

The word *trophic* comes from the same root as *atrophy* and just means "nutritional"; our trophic level is where we are in the food chain. Some scientists have tried to argue that humans are apex predators, a term referring to an animal not just at the top of the food chain but with literally no natural predators. But the varied, buck-wild diet of the human species likely makes us a category all our own.

Our use of livestock animals has also turned us into "predators" in an unusual way. Livestock farmers around the world end up killing wild carnivores as retaliation for lost livestock. Ripple has studied this, too, including in a 2018 paper that looked at the lack of substantial, evidence-based protections for farmers around the world.

The people losing livestock to local carnivores need help to install better ways to protect their livestock, and this in turn will protect local carnivores from being hunted as a stopgap measure to prevent livestock loss.

Ripple studies large carnivores, but even the endangered wildcat species in places like the U.K. and U.S. are threatened by farmers who seek to reduce threats to their livestock. People kill wildcats by accident, or they choose to illegally hunt wildcats. These wildcats are rarely much larger than domestic cats, but can take down livestock larger than themselves.

The pervasion of livestock is just one aspect of the “climate emergency” paper, which also delves into pollution, the environmental cost of commercial and cargo flight, and rebounding rates of deforestation of the Amazon rainforest. And, like a blast from the near past, the greenhouse effect is back in a big way: Greenhouse gases have been less visible in public-facing activism about climate change, but have steadily increased for decades. Global ice cover continues to melt, and the ocean continues to grow more acidic as a result of these changes.

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Despite all the evidence in the massive paper, the emergency isn't hopeless. The team outlines direct, concrete actions that will ameliorate the most dire threats, and most seem to have little impact on the daily lives of average people. Alternative fuel sources like wind and solar, for example, have increased “373 [percent] per decade” but still lag far behind fossil fuels, leaving tons of room for growth in alternative fuels toward Ripple and the scientists' goal to “leave remaining stocks of fossil fuels in the ground.”

As with livestock farmers, people need support to meet them where they are when addressing climate change on a personal level. Most of the suggestions are on a level

to be instituted by world government bodies, NGOs, and organizations or businesses. “As the Alliance of World Scientists, we stand ready to assist decision-makers in a just transition to a sustainable and equitable future,” the researchers conclude in the paper.

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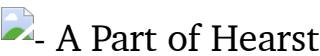
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