

# Climate crisis growing, scientists warn

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Bill Ripple stands in his front yard under a catalpa tree, which is the second-largest in the state as well as being listed as a Corvallis heritage tree.

The climate crisis is getting worse and a “massive-scale mobilization” is needed to avert disaster, according to the latest assessment by a group of scientists led by a pair of Oregon State University researchers.

In November 2019, OSU's William Ripple and Christopher Wolf, along with three co-authors, published a paper in the journal *BioScience* declaring a global climate emergency and calling for global action to address it. More than 11,000 scientists from around the world signed the paper to endorse its findings, a list that has since grown to nearly 14,000 names.

In a follow-up paper in today's edition of *Scientific American*, the OSU researchers and their collaborators argue that the situation has become even more dire over the past year and that "catastrophic climate change could render a significant portion of the Earth uninhabitable" unless urgent action is taken.

"I'm personally much more concerned now than I was a year ago," said Ripple, a distinguished professor of ecology in OSU's College of Forestry.

The latest paper notes that 2020 was one of the hottest years on record and cites severe weather events believed to be driven by climate change, including massive wildfires in the United States and Australia, a Siberian heat wave that saw temperatures in excess of 100 degrees Fahrenheit, a devastating Atlantic hurricane season and a record low measurement of arctic sea ice in October.

Some positive steps were made last year, the authors note, pointing out that the European Union is on track to become carbon-neutral by 2050 and that a few other governments and large corporations are pledging to hit similar target, but they add there is growing evidence that 2050 may be too late to halt global warming.

The authors call on all national governments to declare a global climate emergency and work to make progress in six key areas:

- Swiftly phase out fossil fuels.

- Rapidly cut emissions of short-lived climate pollutants such as methane, soot and hydrofluorocarbons.
- Preserve and restore forests, wetlands, grasslands and other ecosystems for carbon sequestration.
- Shift toward a more plant-based diet to free up resources and reduce greenhouse gas emissions associated with meat production.
- Transition to a carbon-free economy.
- First stabilize, then reduce the human population, which is currently growing by more than 200,000 per day.

Ripple said he sees “a glimmer of hope” in President-elect Joe Biden’s pledge to reverse the Trump administration’s policy of climate change denial and rejoin the Paris accord. He also thinks the growing number and severity of extreme weather events may be bringing the reality of the climate crisis home to everyday people.

“These kinds of things are getting people’s attention and may turn the tide,” he said.

“If the voters speak out loudly enough, at some point the policymakers will follow.”

Academic researchers have been sounding the alarm on climate change for decades. In 1992, for instance, the Union of Concerned Scientists published a strident call to action in *BioScience* titled “World Scientists’ Warning to Humanity.”

Ripple made headlines in 2017 as the lead author on a 25th-anniversary update titled “World Scientists’ Warning to Humanity: A

Second Notice,” which attracted an unprecedented 17,000-plus co-signers from 184 countries.

Yet despite the progress that has been made in some areas, Ripple said, it will take much more drastic action for the world to address the danger of climate change in a meaningful way.

“What I think it would look like is something as urgent as dealing with COVID-19,” he said.

“If we took this threat as seriously, then we would immediately start seeing change being enacted.”

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