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EDITORS' PICK

# 'We Are Afraid': Scientists Issue New Warning As World Enters 'Uncharted Climate Territory'

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*Climate research, renewables and circularity*

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A family in Nevada watches the sun set through wildfire smoke. Researchers are warning that ... [+] GETTY IMAGES

A distinguished international team of scientists on Tuesday issued the starkest warning yet that human activity is pushing Earth into a climate crisis that could threaten the lives of up to 6 billion people this century, stating candidly: “We are afraid of the uncharted territory that we have now entered.”

Writing in the journal *Biosciences*, the coalition of 12 researchers, spanning North America, Europe and Asia, state in unusually stark language: “As scientists, we are increasingly being asked to tell the public the truth about the crises we face in simple and direct terms. The truth is that we are shocked by the ferocity of the extreme weather events in 2023.”

[Record climate anomalies](#) seen around the world in 2023 have

astonished the scientific community, raising concerns that further extreme weather, as well as climate tipping points, could arrive sooner than expected. The authors say that the temperature records, which smashed all previous observations, along with record low levels of sea ice, are signs that human activity is “pushing our planetary systems into dangerous instability.”

Such instability, they warn, means that in this century as many as 6 billion of the Earth’s almost 8 billion people could find themselves in regions that are no longer habitable due to climate impacts such as extreme heat and dwindling food supplies.

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The report is a major update to a [2019 bulletin](#), since co-signed by more than 15,000 scientists from 163 countries, that called on governments to make serious and rapid changes to current, high-emitting economic systems or face “untold suffering” worldwide.

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Drawing on the cumulative body of Earth systems research, from disciplines spanning atmospheric physics, oceanography, biology, paleoclimatology and human geography, Tuesday's *Biosciences* report shows that the world is now undergoing changes at a speed never before seen in human existence. Juxtaposed against the "minimal progress" among governments to slow climate change, the authors write, "It is the moral duty of us scientists and our institutions to clearly alert humanity of any potential existential threat and to show leadership in taking action."



An aerial view of Carti Sugtupu, in the Indigenous Guna Yala Comarca, Panama, in the Caribbean Sea, ... [+] AFP VIA GETTY IMAGES

“Life on our planet is clearly under siege,” William Ripple, distinguished professor of ecology at Oregon State University and a lead author of the report, told media. “The statistical trends show deeply alarming patterns of climate-related variables and disasters. We also found little progress to report as far as humanity combating climate change.”

Co-lead author Christopher Wolf, a postdoctoral scholar at Oregon State University, added: “Without actions that address the root problem of humanity taking more from the Earth than it can safely give, we’re on our way to the potential collapse of natural and socioeconomic systems and a world with unbearable heat and shortages of food and freshwater.”

This latest warning follows hot on the heels of a report released

Monday that indicated melting of the West Antarctic Ice Sheet would continue to accelerate this century regardless of how much fossil fuel use is reduced. The [British Antarctic Survey](#), which authored the report, warned that its findings suggest previous forecasts have seriously underestimated the potential rate and extent of sea level rise, with the West Antarctic Ice Sheet containing enough ice to raise global sea levels “by up to five metres,” or more than 16 feet.

As well as still-rising fossil fuel emissions, the authors of the *Biosciences* report discuss other mechanisms that could have contributed to the year’s [truly astounding climate anomalies](#), including rising rainfall and dust from North Africa, additional water vapor caused by an underwater volcano eruption and regulatory changes that have led to lower sulfate aerosols from ocean shipping—aerosols that are thought to have helped scatter sunlight and created more reflective clouds, thereby partly cooling the planet.

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In their conclusion, the authors call for governments and communities to change their perspective on climate change, “from being just an isolated environmental issue to a systemic, existential threat.” They point out that rising temperatures are just one, interconnected part of a larger problem that

incorporates biodiversity loss, fresh water scarcity and pandemics, all of which are caused by the increasing demands of humans and “overexploitation of our planet.”

The researchers further warn that simply switching to renewable energy from fossil fuel sources will not be sufficient to ensure the continuation of natural and human systems. In their recommendations, they call for:

- The implementation of policies that help reduce resource consumption, by reducing, reusing and recycling waste.
- A global, collaborative effort to ensure climate justice, entailing the fair distribution of the costs and benefits of climate action across less wealthy and more vulnerable parts of the world.
- The reorienting of economic measures to prioritize human well-being over growth.
- Supporting women and girls' education and rights that will lead to stabilization of the human population.

Despite the dire warning, the authors, who also include British chemist Sir David King, Bangladeshi scientist Saleemul Huq, and Swedish researcher Johan Rockström, end their report with a message of hope.

"This is our moment to make a profound difference for all life on Earth," they write. "We must embrace it with unwavering courage and determination to create a legacy of change that will stand the

test of time."

*The full report, "The 2023 state of the climate report: Entering uncharted territory," can be viewed [here](#).*

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David's key interests are in decarbonization and the development of circular economies. A veteran journalist, he is reading for an MSc in Sustainability, Enterprise... **Read More**

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