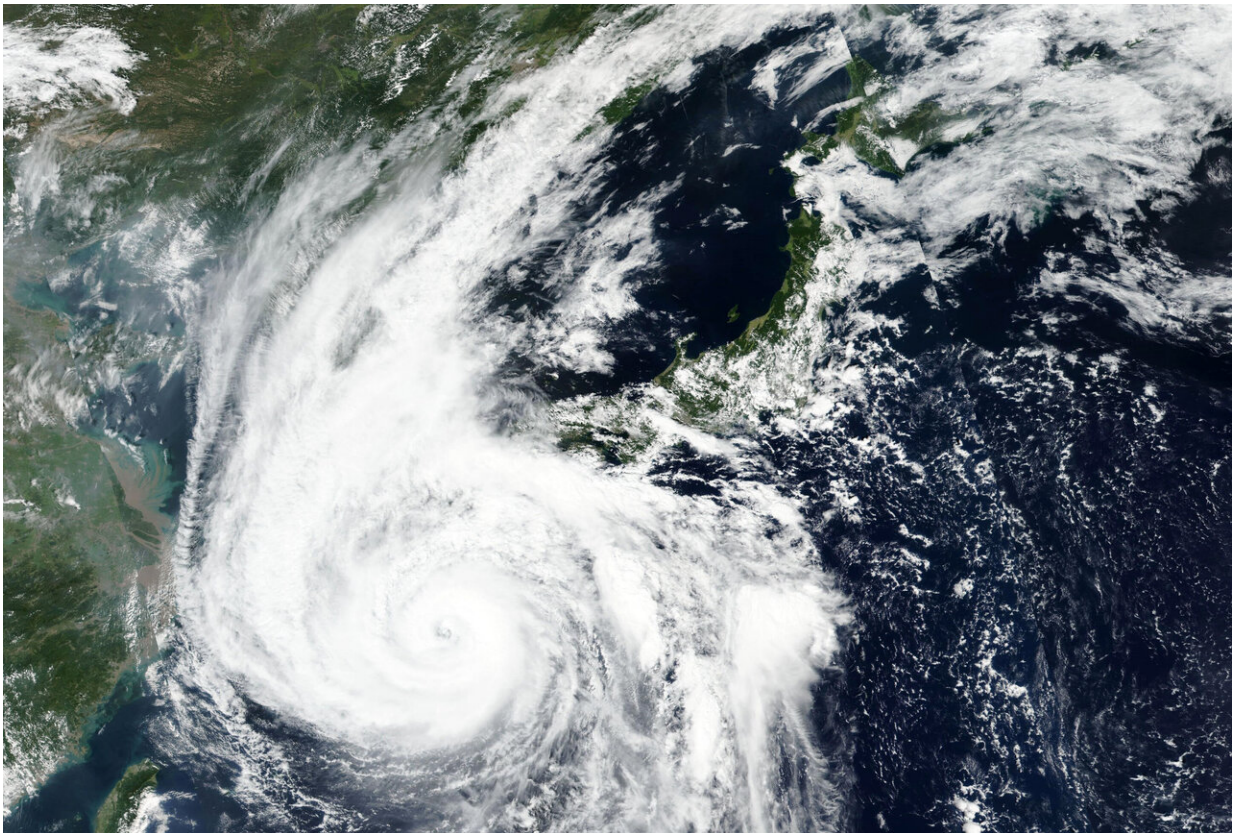


Think 2020's disasters are wild? Experts see worse in future

September 10 2020, by Seth Borenstein



This Sept. 6, 2020, file satellite image released by NASA Worldview, Earth Observing System Data and Information System (EOSDIS) shows Typhoon Haishen barreling toward the main southwestern island of Kyushu. The second powerful typhoon to slam Japan in a week has unleashed fierce winds and rain on southern islands, blowing off rooftops and leaving homes without power as it edged northward into an area vulnerable to flooding and mudslides. (NASA via AP, File)

A record amount of California is burning, spurred by a nearly 20-year mega-drought. To the north, parts of Oregon that don't usually catch fire are in flames.

Meanwhile, the Atlantic's 16th and 17th named [tropical storms](#) are swirling, a record number for this time of year. Powerful Typhoon Haishen lashed Japan and the Korean Peninsula this week. Last month it hit 130 degrees in Death Valley, the hottest Earth has been in nearly a century.

Phoenix keeps setting triple-digit heat records, while Colorado went through a weather whiplash of 90-degree heat to snow this week. Siberia, famous for its icy climate, hit 100 degrees earlier this year, accompanied by wildfires. Before that Australia and the Amazon were in flames.

Amid all that, Iowa's derecho—bizarre straight-line winds that got as powerful as a [major hurricane](#), causing billions of dollars in damages—barely went noticed.

Freak [natural disasters](#)—most with what scientists say likely have a climate change connection—seem to be everywhere in the crazy year 2020. But experts say we'll probably look back and say those were the good old days, when [disasters](#) weren't so wild.

"It's going to get A LOT worse," Georgia Tech climate scientist Kim Cobb said Wednesday. "I say that with emphasis because it does challenge the imagination. And that's the scary thing to know as a climate scientist in 2020."



In this Sept. 7, 2020, file photo, a firefighter battles the Creek Fire as it threatens homes in the Cascadel Woods neighborhood of Madera County, Calif. Climate-connected disasters seem everywhere in the crazy year 2020. But scientists Wednesday, Sept. 9, say it'll get worse. (AP Photo/Noah Berger, File)

Colorado University environmental sciences chief Waleed Abdalati, NASA's former chief scientist, said the trajectory of worsening disasters and climate change from the burning of coal, oil and gas is clear, and basic physics.

"I strongly believe we're going to look back in 10 years, certainly 20 and definitely 50 and say, 'Wow, 2020 was a crazy year, but I miss it,'" Abdalati said.

That's because what's happening now is just the type of crazy climate scientists anticipated 10 or 20 years ago.

"It seems like this is what we always were talking about a decade ago," said North Carolina State climatologist Kathie Dello.

Even so, Cobb said the sheer magnitude of what's happening now was hard to fathom back then. Just as the future of climate disasters is hard to fathom now.

"A year like 2020 could have been the subject of a marvelous science fiction film in 2000," Cobb said. "Now we have to watch and digest real-time disaster after disaster after disaster, on top of a pandemic. The outlook could not be any more grim. It's just a horrifying prospect."



In this Aug. 23, 2020, file photo, fire consumes land recently deforested by cattle farmers near Novo Progresso, Para state, Brazil. Climate-connected disasters seem everywhere in the crazy year 2020. But scientists Wednesday, Sept. 9, say it'll get worse. (AP Photo/Andre Penner, File)

"The 2030s are going to be noticeably worse than the 2020s," she said.

University of Michigan environment dean Jonathan Overpeck, a climate scientist, said that in 30 years because of the climate change already baked into the atmosphere "we're pretty much guaranteed that we'll have double what we have now."

Expect stronger winds, more drought, more heavy downpours and floods, Abdalati said.

"The kind of things we're seeing are no surprise to the (scientific) community that understands the rules and the laws of physics," Abdalati said.

"A lot of people want to blame it on 2020, but 2020 didn't do this," Dello said. "We know the behavior that caused climate change."

Consider the world's environment like an engine: "We have injected more energy into the system because we have trapped more heat into the atmosphere," said World Meteorological Organization Secretary-General Petteri Taalas.



In this Aug. 27, 2020, file photo, buildings and homes are flooded in the aftermath of Hurricane Laura near Lake Charles, La. Climate-connected disasters seem everywhere in the crazy year 2020. But scientists Wednesday, Sept. 9, say it'll get worse. (AP Photo/David J. Phillip, File)

That means more energy for tropical storms as well as changes to rainfall patterns that bring drought to some places and heavy rainfall to others, Taalas said.

In California, where more than 2.3 million acres have burned, the fires are spurred by climate change drying plants and trees that then go up in flames, said University of Colorado fire scientist Jennifer Balch. California is in the midst of a nearly 20-year mega-drought, the first of its kind in the United States since Europeans arrived, Overpeck said.

Scientists also make direct connections between heat waves and climate change.

Some disasters at the moment can't be directly linked to man-made warming, such as the derecho, Overpeck said. But looking at the big picture over time shows the problem, and it's one that comes down to the basic physics of trapped heat energy.



In this Aug. 17, 2020, file photo, Steve Krofchik cools off with a bottle of ice water on his head in Death Valley National Park, Calif. Climate-connected disasters seem everywhere in the crazy year 2020. But scientists Wednesday, Sept. 9, say it'll get worse. (AP Photo/John Locher, File)



In this Sept. 9, 2020, file photo, firefighters watch the Bear Fire approach in Oroville, Calif. Climate-connected disasters seem everywhere in the crazy year 2020. But scientists Wednesday say it'll get worse. (AP Photo/Noah Berger, File)

"I am not an alarmist. I don't want to scare people," Abdalati said. "It's a problem with tremendous consequences and it's too important not to get right."

And so even though the [climate](#) will likely get worse, Overpeck is also optimistic about what future generations will think when they look back at the wild and dangerous weather of 2020.

"I think we'll look back and we'll see a whole bunch of increasingly crazy years," Overpeck said. "And that this year, in 2020, I hope we look back

and say it got crazy enough that it motivated us to act on [climate change](#) in the United States."

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