

Scientists are frantically copying US climate data, fearing it might vanish under Trump

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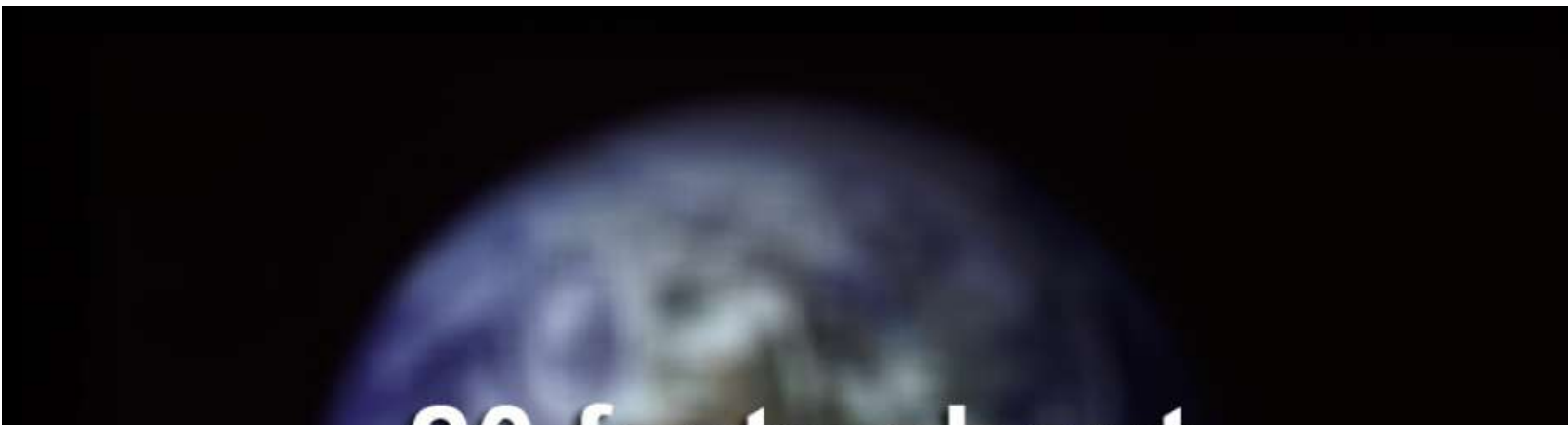
Alarmed that decades of crucial climate measurements could vanish under a hostile Trump administration, scientists have begun a feverish attempt to copy reams of government data onto independent servers in

hopes of safeguarding it from any political interference.

The efforts include a "guerrilla archiving event" in Toronto where experts will copy irreplaceable public data, meetings at the University of Pennsylvania focused on how to download as much federal data as possible in the coming weeks, and a collaboration of scientists and database experts who are compiling an online site to harbor scientific information.

"Something that seemed a little paranoid to me before all of a sudden seems potentially realistic, or at least something you'd want to hedge against," said Nick Santos, an environmental researcher at the University of California at Davis, who over the weekend began copying government climate data onto a nongovernment server, where it will remain available to the public. "Doing this can only be a good thing. Hopefully they leave everything in place. But if not, we're planning for that."

In recent weeks, Trump has nominated a growing list of Cabinet members who have questioned the overwhelming scientific consensus around global warming. His transition team at the Department of Energy has asked agency officials for names of employees and contractors who have participated in international climate talks and worked on the scientific basis for Obama-era regulations of carbon emissions. One Trump adviser suggested that NASA no longer should conduct climate research and instead should focus on space exploration.



20 facts about climate change

IMAGE 1 OF 22

20 facts about climate change

Those moves have stoked fears among the scientific community that Trump, who has called the notion of man-made climate change "a hoax" and vowed to reverse environmental policies put in place by President Barack Obama, could try to alter or dismantle parts of the federal government's repository of data on everything from rising sea levels to the number of wildfires in the country.

Michael Halpern, deputy director of the Center for Science and Democracy at the advocacy group Union of Concerned Scientists, argued that Trump has appointed a "band of climate conspiracy theorists" to run transition efforts at various agencies, along with nominees to lead them who share similar views.

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"They have been salivating at the possibility of dismantling federal climate research programs for years. It's not unreasonable to think they would want to take down the very data that they dispute," Halpern said in an email. "There is a fine line between being paranoid and being prepared, and scientists are doing their best to be prepared . . . Scientists are right to preserve data and archive websites before those who want to dismantle federal climate change research programs storm the

castle."

To be clear, neither Trump nor his transition team has said that the new administration plans to

manipulate or curtail publicly available data. The transition team did not respond to a request for comment. But some scientists aren't taking any chances.

"What are the most important .gov climate assets?" Eric Holthaus, a meteorologist and self-proclaimed "climate hawk," tweeted from his Arizona home Saturday evening. "Scientists: Do you have a US .gov climate database that you don't want to see disappear?"

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Within hours, responses flooded in from around the country. Scientists added links to dozens of government databases to a Google spreadsheet. Investors offered to help fund efforts to copy and safeguard key climate data. Lawyers offered pro bono legal help. Database experts offered help organizing mountains of data and free server space to house it. In California, Santos began building an online repository to "make sure these data sets remain freely and broadly accessible."

Climate data from NASA and the National Oceanic and Atmospheric Association have been politically vulnerable. When Tom Karl, director of the National

Centers for Environmental Information, and his colleagues published a study in 2015 seeking to challenge the idea that there had been a global warming "slowdown" or "pause" during the 2000s, they relied, in significant part, on updates to NOAA's ocean temperature data set, saying the data "do not support the notion of a global warming 'hiatus.'"

In response, the U.S. House Science Committee chair, Rep. Lamar Smith, R-Texas, tried to subpoena the scientists and their records.

That effort launched by Holthaus is one of several underway to preserve key federal scientific data.

In Philadelphia, researchers at the University of Pennsylvania, along with members of groups such as Open Data Philly and the software company Azavea, have been meeting to figure out ways to harvest and store important data sets.

At the University of Toronto this weekend, researchers are holding what they call a "guerrilla archiving" event to catalogue key federal environmental data ahead of Trump's inauguration. The event "is focused on preserving information and data from the Environmental Protection Agency, which has programs and data at high risk of being removed from online public access or even deleted," the organizers wrote. "This includes climate change, water, air, toxics programs."

The event is part of a broader effort to help San Francisco-based Internet Archive with its End of Term 2016 project, an effort by university, government and nonprofit officials to find and archive valuable pages on federal websites. The project has existed through several presidential transitions.

At the American Geophysical Union's fall meeting in San Francisco, where more than 20,000 earth and climate scientists have swarmed the city's biggest conference center this week, an air of gallows humor marked many conversations. Some young scientists said their biggest personal concern is funding for their research, much of which relies on support from NASA and other agencies.

"You just don't know what's coming," said Adam Campbell, who studies the imperiled Ross Ice Shelf in Antarctica.

But others also arrived at the meeting with a strengthened sense of resolve. Campbell was planning to join hundreds of other people at a rally Tuesday, organized by the activist group Climate Truth, encouraging researchers to "stand up for science." "People have felt a call to arms," Campbell said. "We need to be outspoken."

Attorneys with the Climate Science Legal Defense Fund - which provides legal assistance to researchers facing lawsuits over their work on climate change - will be holding one-on-one consultations with researchers who think they might need help from a lawyer. And the organization's table in the AGU exhibition hall is piled high with booklets titled "Handling Political Harassment and Legal Intimidation: A Pocket Guide for Scientists."

"We literally thought about it the day after the election," said Lauren Kurtz, the group's executive director. "I have gotten a lot of calls from scientists who are really concerned . . . So it's intended in some ways to be reassuring, to say, 'There is a game plan; we're here to help you.'"

The 16-page guide contains advice for government researchers who believe their work is being suppressed, as well as how scientists should react if they receive hate mail or death threats.

Holthaus, who encouraged scientists to flag key databases, said the effort to safeguard them is mostly precautionary.

"I don't actually think that it will happen," he said of efforts by an incoming administration to obscure or alter scientific data. "But I think it could happen . . . All of these data sets are priceless, in the sense that if there is a gap, it greatly diminishes their usefulness."

That's the main concern for Andrew Dessler, a professor of atmospheric sciences at Texas A&M University. He said he doubts even the most hostile administration would try to do away with existing

climate data, given the potential backlash.

"I think it's much more likely they'd try to end the collection of data, which would minimize its value. Having continuous data is crucial for understanding long-term trends," Dessler said. "Trends are what climate change is about - understanding these long-term changes. Think about how much better off the people who don't want to do anything about climate change would be if all the long-term temperature trends didn't exist."

He added, "If you can just get rid of the data, you're in a stronger position to argue we should do nothing about climate change."

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The Washington Post's Chris Mooney in Washington and Sarah Kaplan in San Francisco contributed to this report.

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