

Proposed cuts in US climate science reverberate worldwide

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US President Donald Trump has called for drastic cutbacks across multiple federal agencies that track and analyse climate

The gutting of US-funded climate science would cripple research agendas worldwide and hamper the global fight against climate change, say scientists outside the United States, some of whom will take to the streets Saturday to make that point.

US President Donald Trump has called for drastic cutbacks across multiple federal agencies that track and analyse climate by gathering data from satellites, the deepest ocean trenches, and everything in between.

Tens of thousands of scientists are set to converge on Washington DC in protest, with hundreds of smaller marches planned in cities around the world.

"An unprecedented attack on science, scientists and evidence-based policymaking is underway," said Kenneth Kimmell, president of the Union of Concerned Scientists, a Washington-based policy institute.

"And nowhere is the attack more ferocious than on the issue of global warming."

Indeed, proposed cuts to research budgets in the Departments of Energy, the Environmental Protection Agency, NASA and the National Oceanic and Atmospheric Administration—totalling billions of dollars and thousands of jobs—are concentrated on climate science, which Trump has notoriously dismissed as a "hoax" perpetrated by the Chinese.

Scientists in Europe, Asia and Australia express alarm not just at the slowdown in US research, but the knock-on consequences for their own work.

"The impacts may range from troublesome to disastrous," Bjorn Samset, research director at the Center for International Climate Research in Oslo, told AFP.

"We use US climate-related data—particularly from satellites—on a daily basis."

The United States, driven by its big federal agencies, "has become THE global provider of high quality, long-term datasets," he added.



A glacier is seen from NASA's Operation IceBridge research aircraft above Greenland, studying how polar ice has evolved over the past nine years

Beyond raw data

Some of the programmes targeted for axing, for example, are crucial for tracking how much carbon is vented into the atmosphere, or how the distribution of clouds—one of the key uncertainties in projections of future climate change—might evolve over time.

"This would impair our ability in the future to keep our observations, and understanding, up to speed," said Joeri Rogelj, a research scholar at

the International Institute for Applied Systems Analysis in Vienna, one of the world's leading centres for climate modelling.

For Myles Allen, head of the University of Oxford's Climate Research Group, the damage from a US pullback would go well beyond raw data.

"If we lose that intellectual firepower, it is obviously going to make dealing with the problem that much harder," he said in an interview. "We need American technology and innovation to find solutions."

Allen noted that the European Union and China are "stepping up their game" in monitoring climate, but said Washington may not see that in a positive light.

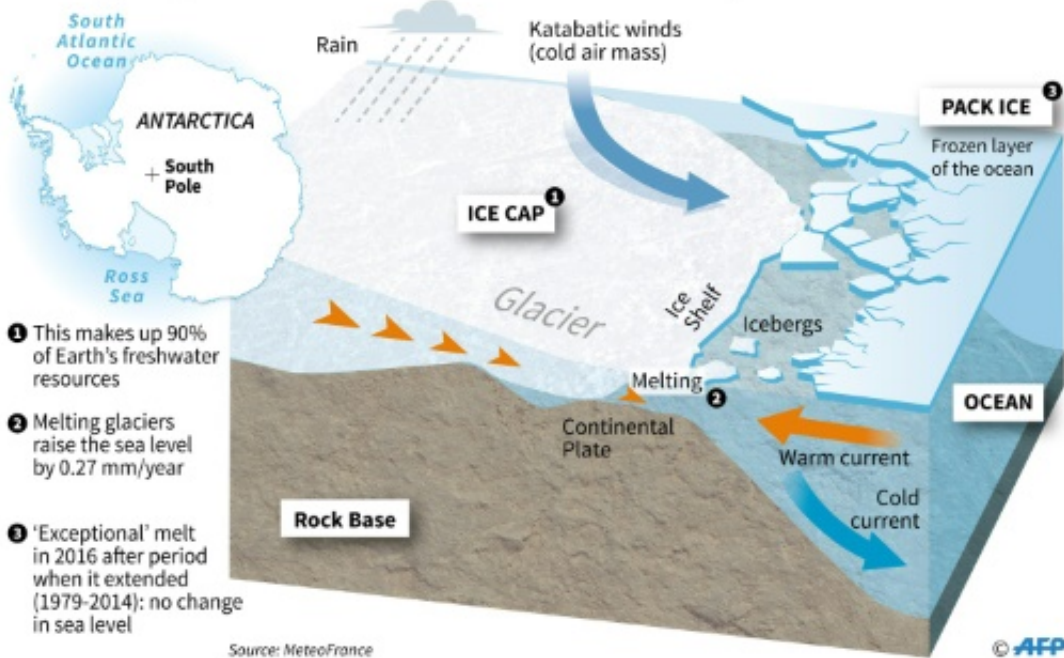
"Does the US want to rely on observations made by overseas agencies in measuring the impact of Chinese emissions on the US weather?", he wondered.

Three of six major international platforms shared by climate modellers—who calculate the risks of future climate change—are maintained and operated in the United States, and could be in peril.

"If we lose one or two of these data distribution centres in the US, it could collapse the entire coordinated system for sharing these simulations of future climate," said Valerie Masson Delmotte, research director at France's Alternative Energies and Atomic Energy Commission, and a lead scientist of the UN's climate science panel.

Is Antarctica's ice on the decline?

The average temperature of the continent has risen 3°C over the last 50 years



Cutaway of Antarctica with data on the glaciers and ice shelf

'Darker days ahead'

New visa and travel restrictions in the United States likewise threaten future collaboration, said Samset, noting that almost all important climate research crosses national boundaries.

"This has already gotten harder to arrange within the US, or abroad with US participation," he said.

Shun Chi-ming, director of the Hong Kong Observatory, said he was "highly concerned" that impending US cuts in climate research could also affect "weather and disaster monitoring".

When it comes to taking their concerns into the street with a slogan on a placard, Allen, Rogelj, and other researchers are clearly torn.

"Demonstrations and protests are usually far outside the comfort zone of scientists," said Samset.

But Trump's disregard for scientific consensus—seen in the appointment of outright climate deniers to key administration posts—has forced many to reconsider the boundary between their role as scientist and citizen.

"Scientists need to be very careful about coming out in favour of one position or another," said Allen, adding that he hoped the marches didn't get "sidetracked" into environmental campaigning.

But for Alena Kimbrough, an expert on the Australian-Indonesian monsoon system at Australia National University and co-organiser of Saturday's marches in Australia, scientists "can no longer afford to stand at the sidelines."

"I am deeply disturbed that this movement is required, but we have much darker days ahead of us if we don't start here," she told AFP.

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