

# Australia's weather and climate science must prepare for coming US cuts

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## **Opinion article**

When cyclone Alfred barrelled towards the Queensland coast in early March, authorities based their warnings partly on data from a powerful US satellite capable of peering through clouds.

Australia and other nations have long relied on these polar-orbiting microwave devices run by the US Defense Meteorological Satellite Program. They give us vital insights about wind-speeds over oceans and other data that improve weather forecasts – and have few substitutes.

Now, access to that public good science - and a vast array of other weather and climate data - is now under its own cloud after deep and apparently random cuts by the Trump Administration.

Remarkably, even the US National Weather Service wasn't sure until just days before the Atlantic hurricane season began ramping up whether it would retain access to such satellites.

It's understandable governments and the media have focused on every assault on trade since the second Trump Administration took office in January. Those directed at America's own scientific agencies and their global partnerships, though, have largely flown below the radar.

At least seven European nations are undertaking reviews of reliance on US marine, climate and weather services, [Reuters reported on Friday](#). We can't afford to be timid in our response either.

The stakes could hardly be higher. Australia's main weather and climate models rely on inputs from the US, so their accuracy would be undermined if data access ceases without alternatives.

You don't have to be a farmer, sailor or pilot, to value a good forecast. If you want to know when a marine heatwave might trigger an algal bloom or how an earthquake might unleash tsunamis, you can also appreciate the visceral importance of globally connected early warning systems.

Among those systems now at risk include the Argo Float program, a swarm of drifting devices that measure the temperature and salinity of the top two kilometres of the oceans every 10 days. The US currently funds more than half the A\$60 million array, including 380 of these floats in Australia's own search and rescue domain.

The looming funding cuts may see the US remove 900 floats a year. It may also stop paying the A\$2m annual data transmission costs and sack the eight-person team in the US processing the information for global use.

Short-term ocean forecasts, particularly in the tropics where US Argo floats predominate, would be rendered useless for most applications, should the cuts occur. A hint national security may be compromised is the risk posed to the related Bluelink ocean prediction service, which won a Department of Defence Eureka Prize for Outstanding Science in Safeguarding Australia in 2024.

Then there's the Pacific Marine Environment Laboratory, among a slew of climate labs and cooperative institutes with 420 staff that US's National Oceanic and Administration (NOAA) [has earmarked to close](#) next year. As the

Conversation [noted in an article last week](#), Australia has relied on PMEL for early warnings to declare every El Niño and La Niña for the past 30 years.

Similarly, a vital component of Australia's ACCESS climate model is developed primarily at NOAA's Geophysical Fluid Dynamics Laboratory. Without GFDL, the pace of model progress would halve, affecting a program that underpins all Australian climate projections used by industry and government for planning and climate risk.

The Climate Change Authority is monitoring the threats closely. Just last week, we released a [report on the outlook for the Great Barrier Reef](#). Grim as it is – unless the world slashes carbon emissions – the work relied on data from NOAA's Coral Reef Watch, another service in doubt. Our Bureau of Meteorology tracks Coral Sea temperature changes but not to NOAA's standard.

The Authority welcomes efforts by Australia's science agencies, universities and government departments to assess where our most pressing vulnerabilities lie.

The US has put us on notice even if our worst fears aren't realised. For insurance, we're must invest more in our domestic capabilities and forge new partnerships abroad not least because the challenges – from carbon emissions cuts to climate adaptation – are going to intensify.

It's worth recalling that collaboration on weather forecasting persisted through the Cold War because of the clear global good. The World Meteorological Organization marked 75 years in March, as one example, and international teamwork will be a central theme of this year's global climate summit in Brazil.

In an era when climate change is driving ever wilder weather, we're going to need more such cooperation – no matter the whims of the White House.