

# OPINION

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# The butterfly effect in global climate finance

### Why Asia needs its own regional climate alliance as the US retreats

**G**lobal warming does not pause for politics. Heatwaves across India, cyclones on both coasts, and monsoon floods and droughts do not wait for election cycles or budget seasons. They also do not respect borders. The impacts travel across oceans and supply chains, and they show up as food prices, health emergencies, and fragile infrastructure. Every kilometre of coastline and every farming district depends on timely, credible forecasts.

On January 7, 2026, the White House issued a memorandum directing US agencies to withdraw from 66 international organisations and agreements, including the UN Framework Convention on Climate Change (UNFCCC) and the Intergovernmental Panel on Climate Change (IPCC). On January 8, the US Treasury notified that it was withdrawing from the Green Climate Fund, a fund for climate finance established under the UNFCCC. The legal mechanics will play out over time, but the signal is clear. Climate cooperation is being treated as optional, even when the climate threat is not.

Climate institutions sit on top of the global climate services chain. Observations from satellites, ships, buoys, and weather stations feed into global forecast systems. Supercomputers assimilate the data and run models. National agencies convert these into warnings and planning. Break any link in that chain and the cost shows up later as wider uncertainty and slower action.

Nobody notices the missing bolt until the bridge starts to shake.

The US argues that stepping away saves money and avoids external constraints. In the narrow arithmetic of annual contributions, that can be true. However, the larger arithmetic is about risk. If the US weakens its own climate and weather science, the first victim is not an international meeting. It is American safety and economic stability. Hurricanes, floods, wildfires, and heat already impose enormous losses across the US. Forecast skill comes from sustained investment and from scientists who spend decades improving models and warning systems.

That is why the parallel debate around the National Oceanic and Atmospheric Administration (NOAA) matters. Proposals in the US budget debate have targeted NOAA's research offices and laboratories that monitor weather and climate across global oceans, and that improve climate models, seasonal outlooks, and hurricane science. One flagship lab is the Geophysical Fluid Dynamics Laboratory in Princeton, where pioneers built some of the first ocean-atmosphere climate models in the late 1960s. If research capacity is cut sharply, it does not only slow scientific discovery. It also slows the steady upgrades that keep forecasts reliable as extremes intensify.

The consequences are not distant for India. Weather and climate are one connected system. You cannot run a credible monsoon forecast with blind spots over the Pacific or the poles. A concrete example is the ocean buoy network in the Pacific known as TAO/TRITON, designed to improve understanding and prediction of the El

Niño-La Niña cycle. Why does this matter to India? It matters because El Niño is the "master switch" for the Indian monsoon. If we lose the ability to detect the early onset of El Niño because US funding has dried up, the Indian Meteorological Department (IMD) loses critical lead time in forecasting a drought year. Yes, the implication of a budget cut in Washington DC could be a failed harvest in Vidarbha.

Cuts to climate finance set off a similar butterfly effect. When a major contributor steps away from mechanisms like the Green Climate Fund, projects that protect vulnerable communities face delays or downsizing. The World Meteorological Organisation (WMO) has been forced to review priorities and consider staff cuts due to funding shortfalls, even as the need for early warnings grows. That is exactly the kind of gap the world cannot

afford. For the Global South, the priority is continuity. Adaptation planning, early warning, and resilient infrastructure should not be hostage to geopolitical mood swings. India cannot treat this as someone else's problem. It affects the reliability of our climate services and the predictability of our development pathways.

A second risk is already forming. If public climate data becomes less reliable or less accessible, private actors will fill the gap. AI-driven forecasting such as DeepMind's GraphCast, and initiatives like NVIDIA's Earth-2 platform, show promise. But privatisation changes incentives. Public agencies are meant to warn everyone. Private firms are meant to serve paying customers. If essential climate services become a commodity, richer actors buy safety



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first, and poorer people inherit the risk. Climate data then becomes a market advantage rather than a public shield.

This privatisation of essential climate services is the plausible endgame of the US withdrawal. If weather forecasts become a commodity rather than infrastructure, the Global South risks being priced out of safety. India is uniquely exposed. We sit at the intersection of high climate risk and high data dependence. While ISRO has made tremendous strides with the INSAT and OceanSat series, we still rely heavily on the global data pool for our forecasts.

India has a well-maintained observational network over land and in the adjoining seas, but we depend on the US and other partners to fill the gaps in our observational coverage, particularly over the vast, data-sparse oceans. The Indian Ocean is monitored by a mix of buoys, many of which depend on international collaboration. If the US retreats from such cooperation, India faces a single-point failure risk.

The way forward is to insulate core climate services from geopolitics. Europe shows what that can look like through the European Centre for Medium-Range Weather Forecasts (ECMWF), a convention-based institution supported by 30 plus nations that pools high-end computing and delivers world-class forecasts. Asia needs a comparable architecture for the Indo-Pacific region.

India should anchor a regional climate services consortium along with Japan, South Korea, and Singapore, with structured participation from South Asian neighbours. China should

also be engaged for data exchange under global norms, with scientific channels kept open, while building redundancy so that continuity does not depend on any single partner, especially when data sharing can become a security issue. While China has an impressive array of satellites and ocean buoys, relying on a strategic rival for essential climate data is a national security non-starter. If tensions flare up on the Himalayan border, would Beijing cut off the data stream for a cyclone approaching Vishakhapatnam? The risk is too high.

By building a regional climate shield that is public and technically sovereign, we can ensure that when the next great storm gathers over the ocean, we are not waiting for a permission slip from Washington or a price quote from Silicon Valley to know it is coming. Member agencies should commit to a shared pool for essential observations and services, with mirrored data centres so that a political or technical failure in one place does not break the stream. They should run shared forecast and climate records, invest jointly in buoys and coastal radars, and build training pipelines so that expertise is not trapped in a few capitals.

The climate signal is getting louder. The question is whether our institutions are ready to measure it, model it, share it, and act on it.

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