

Only 3 years left—new study warns the world is running out of time to avoid the worst impacts of climate change

July 21 2025, by Piers Forster, Debbie Rosen



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Bad climate news is everywhere. [Africa is being hit particularly hard](#) by climate change and extreme weather, impacting lives and livelihoods.

We are living in a world that is warming at the fastest rate since records began. Yet, governments have been slow to act.

The annual global climate change [conference of the parties \(COP30\)](#) is just months away. All of the 197 countries that belong to the United Nations were supposed to have submitted updated national climate plans [to the UN](#) by February this year. These plans outline how each country will cut its greenhouse gas emissions in line with the legally binding international [Paris Agreement](#). This agreement commits all signatories to limiting human-caused global warming to no more than 1.5°C above pre-industrial levels.

Governments must also bring their newly updated national climate action plans to COP30 and show how they plan to adapt to the impacts that climate change will bring.

But so far, [only 25 countries, covering around 20% of global emissions](#), have submitted their plans, known as [Nationally Determined Contributions](#). In Africa, they are Somalia, Zambia and Zimbabwe. This leaves 172 still to come.

The nationally determined contributions are very important in setting out countries' short- to medium-term commitments on climate change. They also provide a direction of travel that can inform broader policy decisions and investments. Aligning climate plans with development goals could lift [175 million people out of poverty](#).

But arguably only one of the submitted plans—the UK's—is compatible with the [Paris Agreement](#).

We are [climate scientists](#), and one of us (Piers Forster) leads the global science team that publishes the annual [Indicators of Global Climate Change report](#). This report gives an overview of the state of the climate

system. It is based on calculations of the net emissions of greenhouse gases globally, how these are concentrating in the atmosphere, how temperatures are rising on the ground, and how much of this warming has been caused by humans.

The report also looks at how [extreme temperatures](#) and rainfall are intensifying, how much the sea levels are rising, and how much carbon dioxide can still be emitted before the planet's temperature exceeds 1.5°C more than it was in pre-industrial times. This is important because staying within 1.5°C is needed to avoid the worst impacts of climate change.

[Our report shows](#) that human-caused global warming reached 1.36°C in 2024. This boosted average global temperatures (a combination of human-induced warming and natural variability in the climate system) to 1.52°C. In other words, the world has already reached the level where it has warmed so much that it cannot avoid significant impacts from climate change. There is no doubt we are in dangerous waters.

Our dangerously hot planet

Although last year's global temperatures were very high, they were also alarmingly unexceptional. The data speaks for itself. Continued record high levels of greenhouse gas emissions have led to rising atmospheric concentrations of [carbon dioxide](#), [methane](#) and [nitrous oxide](#).

The result is rising temperatures that are rapidly eating into the remaining [carbon budget](#) (the amount of greenhouse gases that can be emitted within an agreed time). This will be [exhausted in less than three years](#) at current levels of emissions.

We need to face this head on: the window to stay within 1.5°C is essentially shut. Even if we can bring temperatures back down in future,

it will be a long and difficult road.

At the same time, climate extremes are intensifying, bringing long-term risks and costs to the [global economy](#) but also, importantly, people. The African continent is now facing its [deadliest climate crisis in over a decade](#).

It would be impossible to imagine economies operating without fast access to trusted data. When share prices plummet or growth stalls, politicians and business leaders act decisively. None would tolerate outdated intelligence on sales or the stock market.

But when it comes to climate, the speed of climate change often outpaces the data available. This means fast decisions can't be made. If we treated climate data as we do [financial reports](#), panic would ensue after each dire update. But while governments routinely pivot when faced with an economic downturn, they have been far slower to respond to what key climate indicators—Earth's vital signs—are telling us.

What needs to happen next

As more countries develop their climate plans, it's time for leaders across the globe to face the hard truths of climate science.

Governments need to have fast access to trusted climate data so that they can develop up-to-date national climate plans. The national climate plans need to take a global perspective too. This is really important for fairness and equity. For example, developed countries must acknowledge that they've emitted more greenhouse gases and take the lead in presenting ambitious mitigation efforts and in providing finance for other countries to decarbonize and adapt.

In Africa, the UN is hosting [UNFCCC Climate Week in Addis Ababa](#) in

September. As well as making plans for COP30, there will be sessions on accessing climate finance and ensuring that the transition to [zero human-caused carbon emissions by 2050](#) (net zero) is just and equitable. The summit also aims to support countries that are still working on their national climate plans.

If nationally determined contributions are implemented, the pace of climate change will slow down. This is vital not just for the countries—and economies—currently on the frontline against [climate change](#), but for a functioning global society.

Just five of the [G20](#) countries have submitted their 2035 plans: Canada, Brazil, Japan, the United States and the United Kingdom. But the G20 is responsible for around 80% of [global emissions](#). This means that South Africa's current G20 presidency can help to ensure that the world prioritizes efforts to help developing countries finance their transition to a low-carbon economy.

Another worrying factor is that just 10 of the updated nationally determined contributions have reaffirmed or strengthened commitments to move away from fossil fuels. This means that national climate plans from the European Union, China and India will be key in testing their climate leadership and keeping the Paris Agreement's 1.5°C temperature goals alive. Many other countries will be scrutinizing what these countries commit to before they submit their own national climate plans.

The data in our report helps the world to understand not just what's happened in recent years, but also what to expect further down the track.

Our hope is that these and other countries submit ambitious and credible plans well before [COP30](#). If they do, this will finally close the gap between acknowledging the climate crisis and making decisive efforts to address it. Every tonne of [greenhouse gas emissions](#) matters.

More information: Piers M. Forster et al, Indicators of Global Climate Change 2024: annual update of key indicators of the state of the climate system and human influence, *Earth System Science Data* (2025). DOI: [10.5194/essd-17-2641-2025](https://doi.org/10.5194/essd-17-2641-2025)

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