

Climate records keep getting shattered. Here is what you need to know

June 6 2024, by Suman Naishadham



A man pours water on his face to cool off on a hot summer day in Guwahati, India, Saturday, May 25, 2024. Month after month, global temperatures are setting new records. Credit: AP Photo/Anupam Nath, File

Month after month, global temperatures are setting new records.

Meanwhile, scientists and climate policymakers warn of the growing likelihood that the planet will soon exceed the warming target set at the landmark Paris 2015 climate talks.

Making sense of the run of climate extremes may be challenging for some. Here's a look at what scientists are saying.

WHAT CLIMATE RECORDS HAVE BEEN BROKEN RECENTLY?

The European Union's climate-watching agency Copernicus declared last month that it was the hottest May on record, marking the 12th straight monthly record high. Separately, the World Meteorological Organization estimated that there's almost a one-in-two chance that average [global temperatures](#) from 2024 to 2028 will surpass the hoped-for warming limit of 1.5 degrees Celsius (2.7 Fahrenheit) since pre-industrial times that was agreed in the Paris talks.

And one more: Earth warmed at a slightly faster rate in 2023 than 2022, a group of 57 scientists determined in a report in the journal *Earth System Science Data*.

ARE CLIMATE SCIENTISTS SURPRISED?

Not really. Many [climate scientists](#) say warming trends are following what they have studied and predicted based on the buildup of [carbon dioxide](#) from rising fossil fuel use.

In 2023, [the levels of those heat-trapping gases](#) in the atmosphere reached historic highs, according to the U.S. National Oceanic and Atmospheric Administration. Carbon dioxide, in particular, which is the most abundant and important of the [greenhouse gases](#) produced by

human activity, rose in 2023 by the third-highest amount in 65 years of recordkeeping, NOAA said.

WHAT DO THE SHATTERED RECORDS MEAN FOR HUMANS?

More suffering. Human-induced climate change has brought [wild weather swings](#), increasingly unpredictable storms and [heat waves that stay over a particular area](#) for longer periods of time.

An Asian heat wave this spring forced schools to close in the Philippines, killed people in Thailand and set records there and in Indonesia, Malaysia, the Maldives and Myanmar. Weeks of [heat waves](#) across parts of India last month also closed schools and killed people.

Life won't end if temperatures exceed the 1.5-degree limit, but things will get worse, scientists say. Previous U.N. studies show massive changes to Earth's ecosystem are more likely to begin between 1.5 and 2 degrees Celsius of warming, including eventual loss of the planet's [coral reefs](#), Arctic sea ice, some species of plants and animals—along with even worse extreme weather events that kill people and damage infrastructure.

"The Paris threshold is not a magic number. Reaching that level of warming over a multiyear average will not cause a noticeable uptick in the impacts we're already witnessing," said Jennifer Francis, a scientist at the Woodwell Climate Research Center in Massachusetts.

WHAT CAN BE DONE?

Climate scientists are steadfast that [fossil fuel use](#) must be phased out to stave off the worst consequences of climate change. The burning of

fossil fuels—oil, gas and coal—is the main contributor to global warming caused by human activity.

"Until greenhouse gas concentrations level off, we will keep breaking temperature records, along with increasingly frequent and intense extreme weather events," said Francis.

Renewable energy has been growing fast, but needs to grow faster still. Efficiencies are being studied, developed and rolled out all across the economy—in the ways we heat houses and buildings, for example, cook our food and [make cement](#)—but scientists say the need to adapt is urgent.

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