

This week's record-breaking global temperatures are likely highest in 'at least 100,000 years'

By Angela Fritz and Laura Paddison, CNN

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People shield themselves from the sun during high temperatures in Seville, Spain, on Thursday.

Angel Garcia/Bloomberg/Getty Images

Global temperatures break heat record

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CNN —

The planet's temperature soared again on Thursday to levels not seen in the modern record-keeping era, marking the fourth straight day of record temperatures. These alarming new records are likely the highest temperatures in "at least 100,000 years," one scientist told CNN.

The global average daily temperature climbed to 17.23 degrees Celsius (63.01 degrees Fahrenheit) on Thursday, according to the University of Maine's Climate Reanalyzer, which uses data from the US National Centers for Environmental Prediction.

It's been a week of record-breaking temperatures. On Monday, the average global temperature reached 17.01 degrees Celsius (62.62 degrees Fahrenheit), the highest

in the NCEP's data, which goes back to 1979. On Tuesday it climbed to 17.18 degrees Celsius, where it remained on Wednesday.

Before this week, the record in NCEP's data was 16.92 degrees Celsius and was set in August 2016.

Though this week's records are not yet official, another global climate tracking agency confirmed several in its own data. The European Union's Copernicus Climate Change Service said Monday's and Tuesday's global temperatures were also records in its data, which dates back to 1940.

While the records are based on observational data sets that only go back to the mid-20th century, they are "almost certainly" the warmest temperatures the planet has seen over a much longer time period, according to Jennifer Francis, a senior scientist at Woodwell Climate Research Center.

Francis estimated that this week's temperatures are the warmest "probably going back at least 100,000 years," calling the records "a huge thing."

Scientists know this because of the many millennia of climate data extracted from proxies like tree rings, ice cores and coral reefs – data that is a cornerstone to their understanding of the climate system and how humans have contributed to rapid global warming since the industrial revolution.

Robert Rohde, a lead scientist at Berkeley Earth who was one of the first to share that global temperatures were soaring this week, told CNN it's very likely that "we're going to keep seeing more of these records fall" this summer.

July is typically the planet's hottest month, but temperatures are already in overdrive because of the combination of El Niño – a natural climate phenomenon in the Pacific Ocean – and the human-caused climate crisis, which is driving global temperatures steadily higher.

"It's not a record to celebrate and it won't be a record for long, with northern hemisphere summer still mostly ahead and El Niño developing," Friederike Otto, senior lecturer in climate science at the Grantham Institute for Climate Change and the Environment in the UK, said earlier this week.

"It just shows we have to stop burning fossil fuels, not in decades, now," Otto said. Temperature records aren't just numbers, "but for many people and ecosystems it's a loss of life and livelihood."