

June sizzles to 13th straight monthly heat record. String may end soon, but dangerous heat won't

July 8 2024, by Seth Borenstein



A woman uses a fan as she walks with her companion on a hot day in Beijing, June 16, 2024. June 2024 was the hottest June on record, according to Europe's Copernicus climate service on Monday, July 8. Credit: AP Photo/Andy Wong, File

Earth's more than year-long streak of record-shattering hot months kept on simmering through June, according to the European climate service Copernicus.

There's hope that the planet will soon see an end to the record-setting part of the heat streak, but not the [climate](#) chaos that has come with it, scientists said.

The [global temperature](#) in June was record warm for the 13th straight month and it marked the 12th straight month that the world was 1.5 degrees Celsius (2.7 degrees Fahrenheit) warmer than pre-industrial times, Copernicus said in an early Monday announcement.

"It's a stark warning that we are getting closer to this very important limit set by the Paris Agreement," Copernicus senior climate scientist Nicolas Julien said in an interview. "The global temperature [continues to increase](#). It has at a rapid pace."

That 1.5 degree temperature mark is important because that's the warming limit nearly all the countries in the world agreed upon in the 2015 Paris climate agreement, though Julien and other meteorologists have said the threshold won't be crossed until there's long-term duration of the extended heat—as much as 20 or 30 years.

"This is more than a statistical oddity and it highlights [a continuing shift in our climate](#)," Copernicus Director Carlo Buontempo said in a statement.



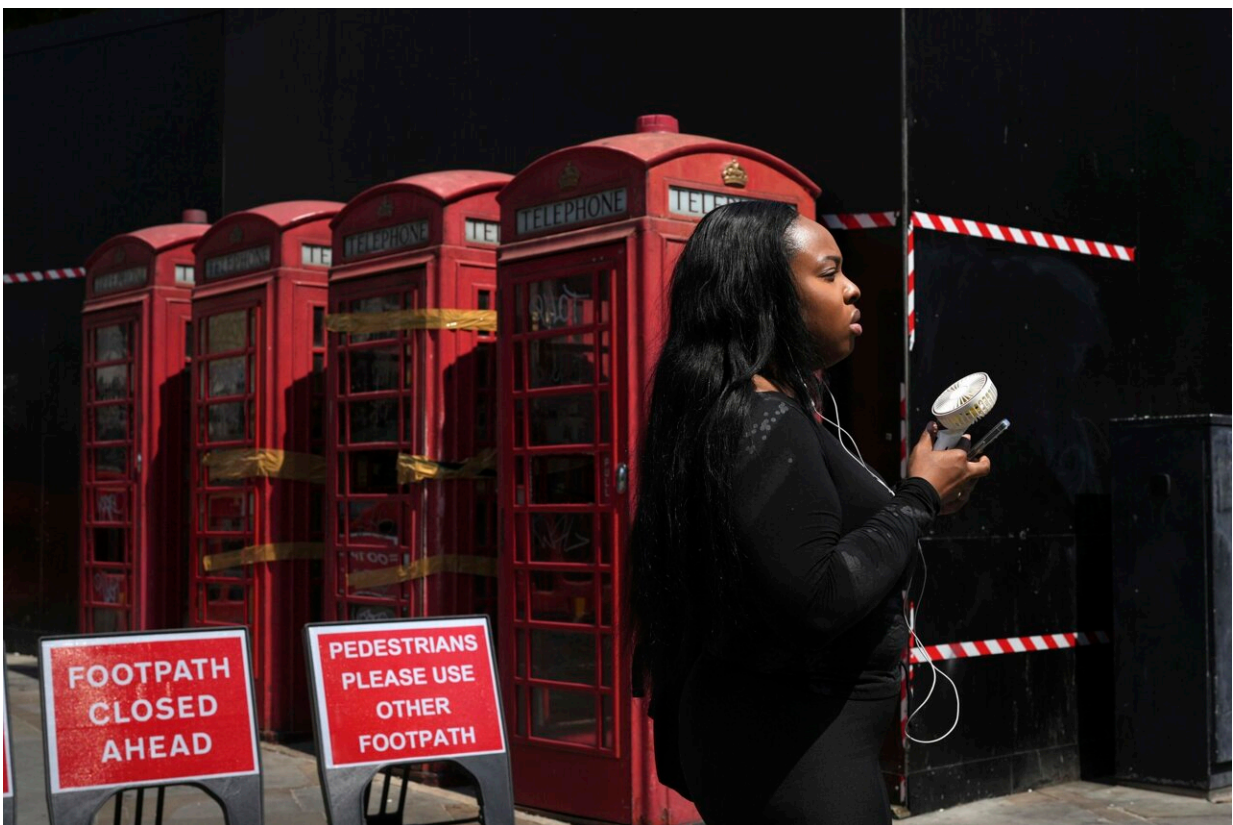
Jorge Moreno, a worker, drinks flavored water to cope with the heat wave during his workday at a construction site in Veracruz, Mexico on June 17, 2024. June 2024 was the hottest June on record, according to Europe's Copernicus climate service on Monday, July 8. Credit: AP Photo/Felix Marquez, File

The globe for June 2024 averaged 62 degrees Fahrenheit (16.66 degrees Celsius), which is 1.2 degrees (0.67 Celsius) above the 30-year average for the month, according to Copernicus. It broke the record for hottest June, set a year earlier, by a quarter of a degree (0.14 degrees Celsius) and is the third-hottest of any month recorded in Copernicus records, which goes back to 1940, behind only last July and last August.

It's not that records are being broken monthly but they are being "shattered by very substantial margins over the past 13 months," Julien

said.

"How bad is this?" asked Texas A&M University climate scientist Andrew Dessler, who wasn't part of the report. "For the rich and for right now, it's an expensive inconvenience. For the poor it's suffering. In the future the amount of wealth you have to have to merely be inconvenienced will increase until most people are suffering."



A woman cools herself with a fan during a hot day in London, June 26, 2024. June 2024 was the hottest June on record, according to Europe's Copernicus climate service on Monday, July 8. Credit: AP Photo/Kin Cheung, File

Even without hitting the long-term 1.5-degree threshold, "we have seen

the consequences of climate change, these extreme climate events," Julien said—meaning worsening floods, storms, droughts and [heat waves](#)

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June's heat hit extra hard in southeast Europe, Turkey, eastern Canada, the western United States and Mexico, Brazil, northern Siberia, the Middle East, northern Africa and western Antarctica, according to Copernicus. Doctors had to treat thousands of heatstroke victims in Pakistan last month as temperatures hit 117 (47 degrees Celsius).

June was also the 15th straight month that the world's oceans, more than two-thirds of Earth's surface, have broken heat records, according to Copernicus data.

Most of this heat is from long-term warming from greenhouse gases emitted by the burning of coal, oil and [natural gas](#), Julien and other meteorologists said. An overwhelming amount of the heat energy trapped by human-caused climate change goes directly into the ocean and those oceans take longer to warm and cool.



Andrea Di Miele, right, from Hoboken, N.J., puts water on his daughter, Sofia Di Miele, 10, with the Lincoln Memorial behind, June 21, 2024, in Washington. Temperatures are forecast to reach 100 degrees on Saturday. June 2024 was the hottest June on record, according to Europe's Copernicus climate service on Monday, July 8. Credit: AP Photo/Alex Brandon, File

The natural cycle of El Ninos and La Ninas, which are warming and cooling of the central Pacific that change weather worldwide, also plays a role. El Ninos tend to spike global temperature records and the strong El Niño that formed last year ended in June.

Another factor is that the air over Atlantic shipping channels is cleaner because of marine shipping regulations that reduce traditional air pollution particles, such as sulfur, that cause a bit of cooling, scientists

said. That slightly masks the much larger warming effect of greenhouse gases. That "masking effect got smaller and it would temporarily increase the rate of warming" that is already caused by [greenhouse gases](#), said Tianle Yuan, a climate scientist for NASA and the University of Maryland Baltimore Campus who led [a study on the effects of shipping regulations](#).

Climate scientist Zeke Hausfather, of the tech company Stripes and the Berkeley Earth climate-monitoring group, said in a post on X that with all six months this year seeing record heat, "that there is an approximately 95% chance that 2024 beats 2023 to be the [warmest year](#) since global surface temperature records began in the mid-1800s."



Margarita Salazar, 82, wipes the sweat off with a tissue inside her home in Veracruz, Mexico on June 16, 2024. June 2024 was the hottest June on record,

according to Europe's Copernicus climate service on Monday, July 8. Credit: AP Photo/Felix Marquez, File



Hunter Van Dyne pauses to wipe sweat from his forehead inside a hot fireworks tent as he works to set up for the opening of Powder Monkey Fireworks, in Weldon Spring, Mo., Monday, June 17, 2024. June 2024 was the hottest June on record, according to Europe's Copernicus climate service on Monday, July 8. Credit: AP Photo/Jeff Roberson, File



A woman, center, weeps as patients of heatstroke receive treatment at a hospital in Karachi, Pakistan, June 25, 2024. June 2024 was the hottest June on record, according to Europe's Copernicus climate service on Monday, July 8. Credit: AP Photo/Fareed Khan, File

Copernicus hasn't computed the odds of that yet, Julien said. The U.S. National Oceanic and Atmospheric Administration last month gave it a 50% chance.

Global daily average temperatures in late June and early July, while still hot, were not as warm as last year, Julien said.

"It is likely, I would say, that July 2024 will be colder than July 2023 and this streak will end," Julien said. "It's still not certain. Things can

change."

Andrew Weaver, a climate scientist at the University of Victoria, said the data show Earth is on track for 3 degrees Celsius of warming if emissions aren't urgently curtailed. And he feared that an end to the streak of record hot months and the arrival of winter's snows will mean "people will soon forget" about the danger.

"Our world is in crisis," said University of Wisconsin climate scientist Andrea Dutton. "Perhaps you are feeling that crisis today—those who live in the path of Beryl are experiencing a hurricane that is fueled by an extremely warm ocean that has given rise to a new era of tropical storms that can intensify rapidly into deadly and costly major hurricanes. Even if you are not in crisis today, each temperature record we set means that it is more likely that climate change will bring crisis to your doorstep or to your loved ones."

Copernicus uses billions of measurements from satellites, ships, aircraft and weather stations around the world and then reanalyzes it with computer simulations. Several other countries' science agencies—including NOAA and NASA—also come up with monthly climate calculations, but they take longer, go back further in time and don't use computer simulations.

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