

# September sizzled to records and was so much warmer than average scientists call it 'mind-blowing'

October 5 2023, by Seth Borenstein

---



People cool off as they bate in the Mediterranean sea in the old port of Acre, north Israel, Sept. 8, 2023, during a heat wave. After a summer of record-smashing heat, warming somehow got even worse in September as Earth set a new mark for how far above normal temperatures were, the European climate agency reported Thursday, Oct. 5. Credit: AP Photo/Ariel Schalit, File

After a summer of record-smashing heat, warming somehow got even worse in September as Earth set a new mark for how far above normal temperatures were, the European climate agency reported Thursday.

Last month's average temperature was 0.93 degrees Celsius (1.7 degrees Fahrenheit) above the 1991-2020 average for September. That's the warmest margin above average for a month in 83 years of records kept by the European Space Agency's Copernicus Climate Change Service.

"It's just mind-blowing really," said Copernicus Director Carlo Buontempo. "Never seen anything like that in any month in our records."

While July and August had hotter raw temperatures because they are warmer months on the calendar, September had what scientists call the biggest anomaly, or departure from normal. Temperature anomalies are crucial pieces of data in a [warming world](#).

"This is not a fancy weather statistic," Imperial College of London [climate](#) scientist Friederike Otto said in an email. "It's a [death sentence](#) for people and ecosystems. It destroys assets, infrastructure, harvest."

Copernicus calculated that the average temperature for September was 16.38 degrees Celsius (61.48 degrees Fahrenheit), which broke the old [record](#) set in September 2020 by a whopping half-degree Celsius (0.9 degrees Fahrenheit). That's a huge margin in climate records.



A man cools off in a shower at Ipanema beach, Rio de Janeiro, Brazil, Sept. 24, 2023. After a summer of record-smashing heat, warming somehow got even worse in September as Earth set a new mark for how far above normal temperatures were, the European climate agency reported Thursday, Oct. 5. Credit: AP Photo/Bruna Prado, File

The hot temperatures stretched across the globe but they were chiefly driven by persistent and unusual warmth in the world's oceans, which didn't cool off as much in September as normal and have been record hot since spring, said Buontempo.

Earth is on track for its hottest year on record, about 1.4 degrees Celsius (2.5 degrees Fahrenheit) warmer than pre-industrial times, according to Samantha Burgess, Copernicus' deputy director.

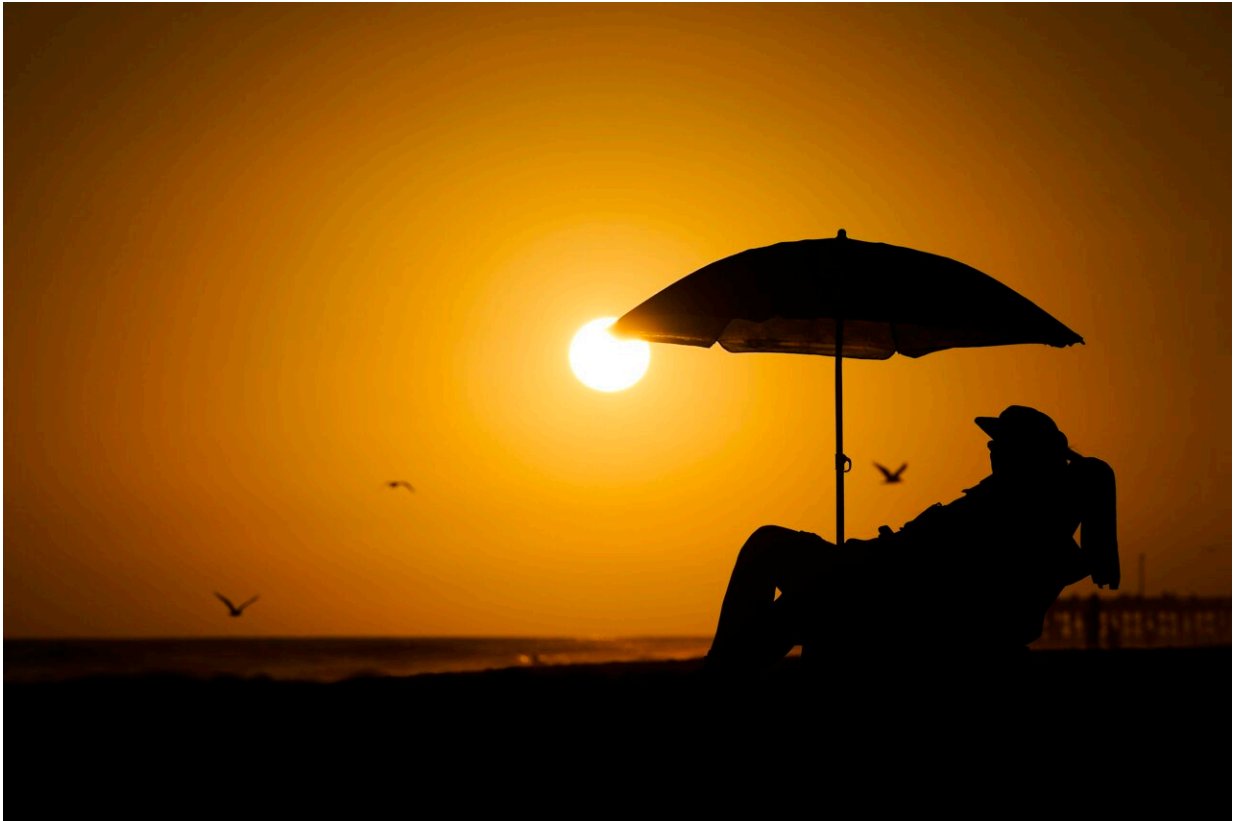
This past September was 1.75 degrees Celsius (3.15 degrees Fahrenheit) warmer than the mid-1800s, Copernicus reported. The world agreed in 2015 to try to limit future warming to 1.5 degrees Celsius (2.7 degrees Fahrenheit) warming since pre-industrial times.

The global threshold goal of 1.5 [degrees](#) Celsius is for long-term [temperature](#) averages, not a single month or year. But scientists still expressed grave concern at the records being set.



A woman uses a fan in the courtyard of the Louvre museum, Sept. 7, 2023, in Paris. After a summer of record-smashing heat, warming somehow got even worse in September as Earth set a new mark for how far above normal temperatures were, the European climate agency reported Thursday, Oct. 5. Credit: AP Photo/Thomas Padilla, File





A person rests under an umbrella as the sun sets, Sept. 12, 2023, in Newport Beach, Calif. After a summer of record-smashing heat, warming somehow got even worse in September as Earth set a new mark for how far above normal temperatures were, the European climate agency reported Thursday, Oct. 5. Credit: AP Photo/Ryan Sun, File



A man stands under a mister to cool off from the heat in Montreal, Sept. 6, 2023. After a summer of record-smashing heat, warming somehow got even worse in September as Earth set a new mark for how far above normal temperatures were, the European climate agency reported Thursday, Oct. 5. Credit: Christinne Muschi/The Canadian Press via AP, File



A woman holds an umbrella to protect herself from the sun, in Paris, Sept. 6, 2023. After a summer of record-smashing heat, warming somehow got even worse in September as Earth set a new mark for how far above normal temperatures were, the European climate agency reported Thursday, Oct. 5. Credit: AP Photo/Thibault Camus, File





A man sunbaths at the Trocadero fountains in front of the Eiffel Tower, Sept. 7, 2023, in Paris. After a summer of record-smashing heat, warming somehow got even worse in September as Earth set a new mark for how far above normal temperatures were, the European climate agency reported Thursday, Oct. 5. Credit: AP Photo/Thomas Padilla, File

"What we're seeing right now is the backdrop of rapid global warming at a pace that the Earth has not seen in eons coupled with El Niño, natural climate cycle" that's a temporary warming of parts of the Pacific Ocean that changes weather worldwide, said U.S. climate scientist Jessica Moerman, who is also president of the Evangelical Environmental Network. "This double whammy together is where things get dangerous."

Though El Niño is playing a part, [climate change](#) has a bigger footprint



in this warmth, Buontempo said.

"There really is no end in sight given new oil and gas reserves are still being opened for exploitation," Otto said. "If you have more record hot events, there is no respite for humans and nature, no time to recover."

Buontempo said El Niño is likely to get warmer and cause even higher temperatures next year.

"This month was, in my professional opinion as a climate scientist—absolutely gobsmackingly bananas," climate scientist Zeke Hausfather [said on X](#), formerly known as Twitter.

© 2023 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed without permission.

Citation: September sizzled to records and was so much warmer than average scientists call it 'mind-blowing' (2023, October 5) retrieved 29 April 2024 from <https://phys.org/news/2023-10-september-sizzled-warmer-average-scientists.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.