

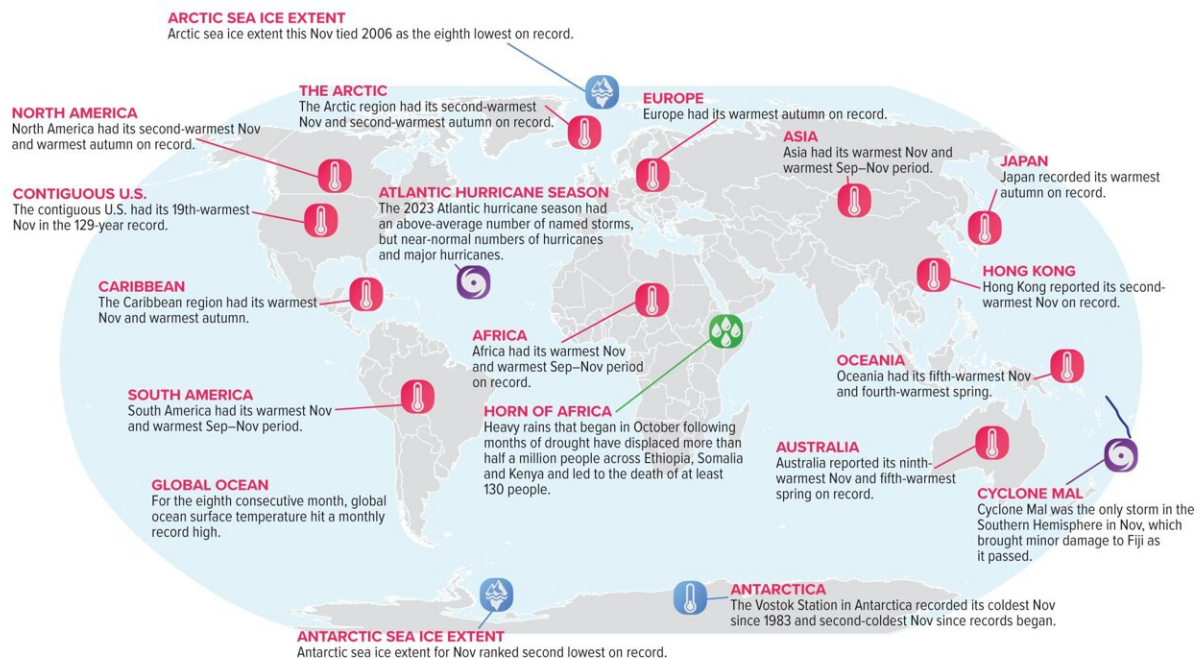
Earth had its warmest November on record

December 15 2023

Selected Significant Climate Anomalies and Events: November 2023

GLOBAL AVERAGE TEMPERATURE

Nov 2023 average global surface temperature ranked highest for Nov since global records began in 1850.



Please note: Material provided in this map was compiled from NOAA's State of the Climate Reports. For more information please visit: <https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/>

A map of the world plotted with some of the most significant climate events that occurred during November 2023. Please see the story below as well as more details in the report summary from NOAA NCEI. Credit: NOAA/NCEI

November 2023 was the warmest November in NOAA's 174-year global climate record.

Last month also continued the year's record-warm streak, according to scientists and data from NOAA's National Centers for Environmental Information.

Below are more highlights from NOAA's November global climate report:

Climate by the numbers

November 2023

The average global land and ocean surface [temperature](#) for November 2023 was 2.59°F (1.44°C) above the 20th-century average of 55.2°F (12.9°C), which makes it the warmest November on record for NOAA.

November also marked the sixth month in a row of record-warm months for 2023. For the eighth consecutive month, the global ocean-surface temperature also set a record high.

November 2023 marked the 47th-consecutive November and the 537th-consecutive month with temperatures above the 20th-century average.

Africa, Asia and South America all had their warmest Novembers on record. North America had its second-warmest November while Oceania had its fifth-warmest November.

Season (September through November 2023)

The season (meteorological spring or autumn, depending on the hemisphere) saw a global surface temperature that was 2.54°F (1.41°C) above the 20th-century average. This ranks as the warmest September–November period on record, and 0.70 of a degree F (0.39 of

a degree C) above the previous season record from 2015.

The year to date (YTD, January through November 2023)

The year to date (YTD, January through November 2023) global land and [ocean surface temperature](#) was 2.07°F (1.15°C) above the 20th-century average, ranking as the warmest such YTD on record. This also makes the YTD considerably warmer—0.20 of a degree F, or 0.11 of a degree C—than the previous record-warm such YTD in 2016.

According to NCEI's Global Annual Temperature Rankings Outlook, there is a greater than 99% chance that 2023 will rank as Earth's warmest year on record.

Other notable climate events from November:

- Global sea ice extent ranked second lowest on record for November: Arctic sea ice extent (coverage) for November 2023 tied 2006 as the eighth smallest in the satellite record, at 3.73 million square miles. This was 190,000 square miles below the 1991–2020 average. Meanwhile, the Antarctic saw its second-smallest November sea ice coverage on record at 5.51 million square miles, or 620,000 square miles below the 1991–2020 average.
- The tropics were relatively quiet: Four named storms occurred across the globe in November, which tied for the second fewest in November since 1981. One of those reached tropical cyclone strength (sustained winds of 74 mph or higher), and none reached major tropical cyclone strength (sustained winds of 111 mph or higher). No storms were active in the Atlantic, which happens about once every three Novembers. The 2023 Atlantic hurricane

[season](#), which officially ended on November 30, had an above-average number of named storms (20) but near-average numbers of hurricanes (seven) and [major hurricanes](#) (three).

Provided by NOAA Headquarters

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