

NOAA: 2010 Tied with 1998 as Warmest Global Temperature on Record

Summer 2010 the second warmest on record, Arctic sea ice continues its 14-year decline

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The first eight months of 2010 tied the same period in 1998 for the warmest combined land and ocean surface temperature on record worldwide. Meanwhile, the June–August summer was the second warmest on record globally after 1998, and last month was the third warmest August on record. Separately, last month’s global average land surface temperature was the second warmest on record for August, while the global ocean surface temperature tied with 1997 as the sixth warmest for August.

The monthly analysis from [NOAA’s National Climatic Data Center](#), which is based on records going back to 1880, is part of the suite of climate services NOAA provides government, business and community leaders, so they can make informed decisions.

Global Temperature Highlights: Year-to-Date; August

- For January–August 2010, the global combined land and ocean surface temperature of 58.5 F (14.7 C) tied with 1998 as the warmest January–August period on record. This value is 1.21 F (0.67 C) above the 20th century average.
- The combined global land and ocean surface temperature for August 2010 was the third warmest on record at 61.2 F (16.2 C), which is 1.08 F (0.60 C) above the 20th century average of 60.1 F (15.6 C). August 1998 is the warmest August on record and 2009 is the second warmest. The August worldwide land surface temperature was 1.62 F (0.90 C) above the 20th century average of 56.9 F (13.8 C) — the second warmest August on record behind 1998. Warmer-than-average conditions dominated land areas of the globe. The most prominent warmth was in eastern Europe, eastern Canada and parts of eastern Asia. Cooler-than-average regions included Australia, central Russia and southern South America.
- The August 2010 average temperature across China was 70.5 F (21.4 C), which is 2.0 F (1.1 C) above the 1971-2000 average and the warmest August since 1961, according to the Beijing Climate Center. Overall, the U.K. experienced its coolest August since 1993, according to the U.K. Met Office. Separately, England had its coolest August since 1993, Wales and Northern Ireland had their coolest August since 1994, and Scotland had its coolest August since 1998.
- The worldwide ocean surface temperature was 0.90 F (0.50 C) above the 20th century average of 61.4 F (16.4 C) and tied with 1997 as the sixth warmest August on record.
- La Niña, the opposite oceanic phenomena as El Niño, continued to strengthen during August 2010 resulting in cooler sea surface temperatures across most of the

equatorial Pacific Ocean. According to NOAA's Climate Prediction Center, La Niña is expected to last at least through the Northern Hemisphere winter 2010–2011.

Global Temperature Highlights: June through August

- The combined global land and ocean average surface temperature for June–August 2010 was the second warmest on record, behind 1998, at 61.3 F (16.2 C), which is 1.15 F (0.64 C) above the 20th century average of 60.1 F (15.6 C).
- The June–August worldwide land surface temperature was 1.80 F (1.00 C) above the 20th century average of 56.9 F (13.8 C) — the warmest June–August on record, surpassing the previous record of 1.66 F (0.92 C) set in 1998.
- Canada experienced its third warmest June–August since national records began in 1948, behind 1998, followed by 2006, according to Environment Canada. January–August 2010 also set a record for the warmest first eight months, surpassing the previous record set in 2006.
- According to Australia's Bureau of Meteorology, Victoria and South Australia had their coolest June–August in 13 years, while New South Wales had its coolest June–August in a decade.
- The worldwide ocean surface temperature was 0.92 F (0.51 C) above the 20th century average of 61.5 F (16.4 C) and was the fifth warmest June–August on record.

Polar Sea Ice and Precipitation Highlights

- Arctic sea ice covered an average of 2.3 million square miles (6.0 million square kilometers) during August. This is 22 percent below the 1979–2000 average extent and the second lowest August extent since records began in 1979. The record low August was set in 2007. This was the 14th consecutive August (1997–2010) with below-average Arctic sea ice extent.
- Antarctic sea ice extent in August was 4.1 percent above the 1979–2000 average, resulting in the largest August sea ice extent on record. The previous record was set in August 2000.
- According to the German Meteorological Service, Deutscher Wetterdienst, Germany had its wettest August since 1901.
- According to Australia's Bureau of Meteorology, the continent received an average of 26.6 mm (1.0 inch) of precipitation during August 2010 — this is 42 percent above the 1961–1990 average. Regionally, Victoria had its wettest August since 1981, the Northern Territory had its wettest August since 1975 and Queensland had its wettest August since 1998.