

2017 likely to be third warmest year on record

November 6 2017



Credit: University of East Anglia

The latest estimate for 2017 suggests the year will be the second or third warmest in a record stretching back to 1850.

Although 2017 isn't likely to break the record global mean surface temperatures set over the previous two years, climate scientists regard this year's figure as noteworthy because it will be the warmest year in the series which hasn't been influenced by an El Niño – the warm phase of the El Niño Southern Oscillation in the tropical Pacific.

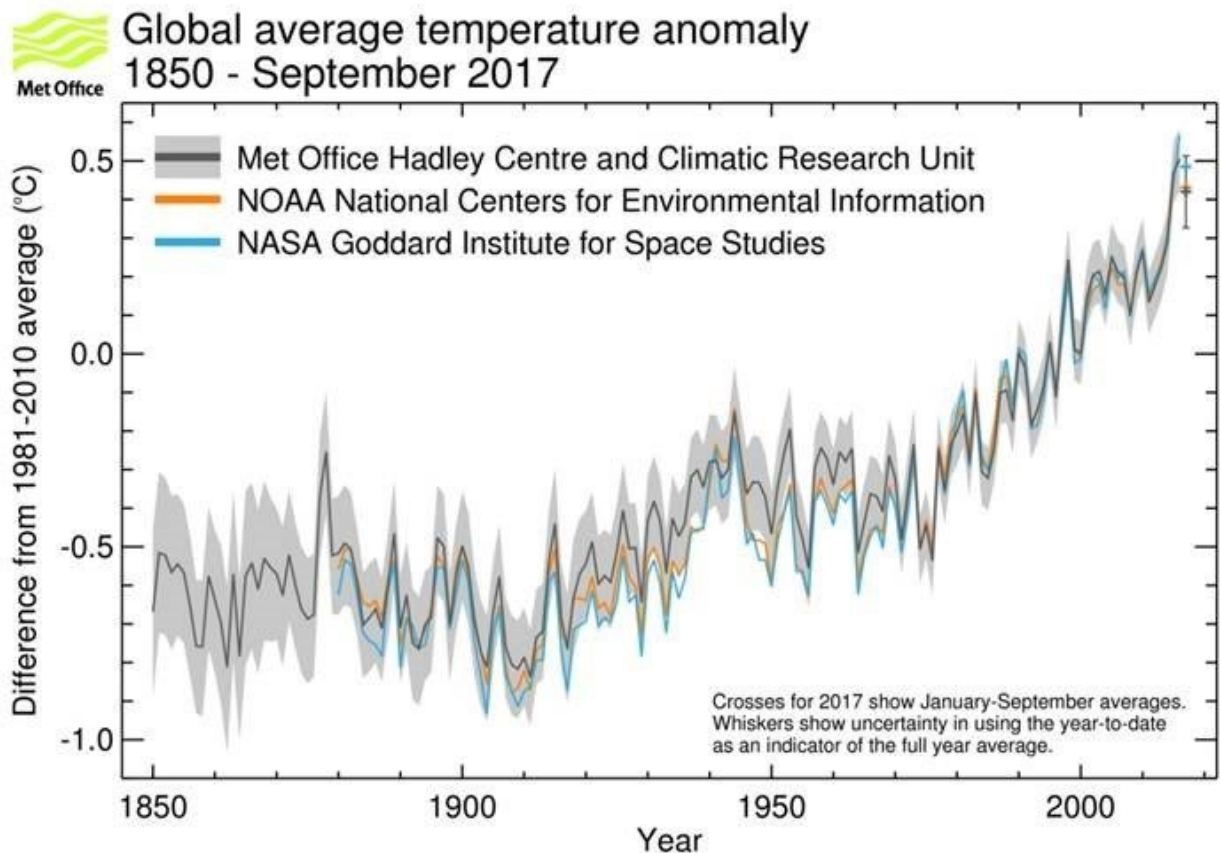
The assessment is based on the HadCRUT4 data set - compiled by

UEA's Climatic Research Unit and the Met Office Hadley Centre.

It shows that global mean surface temperatures for January – September were $0.42^{\circ}\text{C} \pm 0.09^{\circ}\text{C}$ above the 1981–2010 long-term average (or $0.71^{\circ}\text{C} \pm 0.10^{\circ}\text{C}$ above the 1961–1990 long-term average).

Although there are still three months to go, it is likely that 2017 will be the third consecutive year of exceptionally high average surface global temperatures, despite the emergence of cooler conditions in the Pacific.

The World Meteorological Organization's estimate reveals that 2017 is likely to be one of the three hottest years on record together with 2015 and 2016. The WMO bases its [temperature](#) assessment on datasets from several organisations, including the HadCRUT4 dataset.



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Prof Stephen Belcher, Met Office chief scientist, said: "During an El Niño event, warmth is released from the tropical Pacific Ocean and this influences global temperatures, pushing them above the trend from man-made climate change. However, this year is noteworthy because, even without that extra shove from El Niño, we are seeing annual temperatures that are higher than anything in the record prior to 2015."

Prof Tim Osborn, director of UEA's Climatic Research Unit, said: "Data for 2017 so far indicate that 2017 will be around 1°C above pre-industrial levels, an increase almost entirely due to human activities – principally the release of carbon dioxide into the atmosphere by burning coal, oil and gas."

In December 2016, the Met Office prediction for the global mean surface temperature – using the composite World Meteorological Organization figure – was between 0.32 °C and 0.56 °C above the 1981–2010 long-term average (or between 0.63 °C and 0.87 °C above the 1961–1990 long-term average).

The Met Office's Prof Adam Scaife added: "The global mean [surface](#) temperature this year looks likely to agree with the prediction we made at the end of last year that 2017 would be very warm but was unlikely to exceed the [record](#) temperature of 2015 and 2016."

Provided by University of East Anglia

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