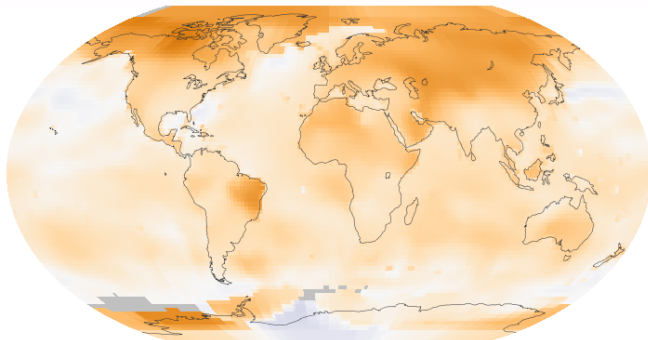


# No substantive evidence for 'pause' in global warming, study finds

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Global mean surface temperature change from 1880 to 2014, relative to the 1951–1980 mean. The black line is the annual mean and the red line is the 5-year running mean. The green bars show uncertainty estimates. Credit: NASA GISS.

There is no substantive evidence for a 'pause' or 'hiatus' in global warming and the use of those terms is therefore inaccurate, new research from the University of Bristol, UK has found.

The researchers, led by Professor Stephan Lewandowsky of Bristol's School of Experimental Psychology and the Cabot Institute, examined 40 peer-reviewed scientific articles published between 2009 and 2014 that specifically addressed the presumed 'hiatus' and found no consistent or agreed definition of such a 'hiatus', when it began and how long it lasted.

The researchers then compared the distribution of decadal warming trends during the 'hiatus' - as defined by the same scientific articles - against other trends of equivalent length in the entire record of modern global warming. The analysis showed that all definitions of the 'hiatus' in the literature were found to be unexceptional in the context of other trends.

The researchers also found that, if sample size is

small, the 'hiatus' will always appear to be present. For example, anyone making a claim for a 'hiatus' of 12 years or below (a claim made by a third of the articles studied) will find one, not because something new and different is happening, but because small sample sizes provide insufficient statistical power for the detection of trends.

Professor Lewandowsky said: "Our study raises the question: why has so much research been framed around the concept of a 'hiatus' when it does not exist? The notion of a 'pause' or 'hiatus' demonstrably originated outside the scientific community, and it likely found entry into the scientific discourse because of the constant challenge by contrarian voices that are known to affect scientific communication and conduct."

Discussing climate change using the terms 'pause' or 'hiatus' creates hazards for the public and the [scientific community](#), the study concludes.

Professor Lewandowsky said: "Scientists may argue that when they use the terms 'pause' or 'hiatus' they know - and their colleagues understand - that they do not mean to imply global warming has stopped.

"But while scientists might tacitly understand that global warming continues notwithstanding the alleged 'hiatus', or they may intend the 'pause' to refer to differences between observed temperatures and expectations from theory or models, the public is not privy to that tacit understanding.

"Therefore, scientists should avoid the use of 'pause' or hiatus' when referring to fluctuations of global mean surface temperature around the longer-term warming trend. There is no evidence for a pause in [global warming](#)."

**More information:** 'On the definition and identifiability of the alleged "hiatus" in global

warming' by Stephan Lewandowsky, James S. Risbey and Naomi Oreskes, *Scientific Reports* (2015)

Provided by University of Bristol

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