

Dire outlook despite global warming 'pause': study

May 19 2013



An island near Stockholm is shown lighted by a sunrise on June 15, 2009. A global warming "pause" over the past decade may invalidate the harshest climate change predictions for the next 50 to 100 years, a study said Sunday—though levels remain in the danger zone.

A global warming "pause" over the past decade may invalidate the harshest climate change predictions for the next 50 to 100 years, a study said Sunday—though levels remain in the danger zone.

Writing in the journal *Nature Geoscience*, an international team of climate scientists said a slower rate of warming increase observed from 2000 to 2009 suggested a "lower range of values" to be taken into account by policy makers.

While the last decade was the hottest since records began in 1880, the rate of increase showed a stabilisation despite ever-rising levels of Earth-warming greenhouse gases in the atmosphere.

Scientists have alternatively explained the flatter curve by oceanic heat capture, a decline in solar activity or an increase in volcanic aerosols that reflect the Sun's rays.

Because of the hiatus, warming in the next 50 to 100 years "is likely to lie within the range of current climate models, but not at the high end of this range," said Alexander Otto of Oxford University's Environmental Change Institute, co-author of the new study.

Otto and his team used up-to-date data on temperatures and levels of solar radiation trapped in the atmosphere by greenhouse gases, to make new projections for climate warming.

The United Nations is targeting a global average maximum temperature rise of two degrees Celsius (3.6 degrees Fahrenheit) on pre-industrial levels, for what scientists believe would be manageable climate change.

In 2007, the UN's Intergovernmental Panel on Climate Change (IPCC) warned in a report of the temperature rising by as much as 6.4 degrees C in the worst emissions scenario.

Study co-author Reto Knutti of ETH Zurich said data ruling out the most extreme scenarios for near-term warming was clearly welcome news.

"But even if the response is at the low end of the current range of uncertainty, we are still looking at warming well over the two-degree goal that countries have agreed upon."

To meet the two-degree goal, countries are negotiating curbs to emissions of Earth-warming greenhouse gases released by fossil fuel burning.

Only last week, the level of carbon dioxide in Earth's atmosphere breached a threshold of 400 parts per million—a level never experienced by humans and considered the absolute maximum for the two-degree target to remain within reach.

Many scientists believe that on current trends, Earth is set for warming much higher than the two-degree target.

Commenting on the publication, University of New South Wales climate researcher Steven Sherwood said the conclusions "need to be taken with a large grain of salt until we see what happens to the oceans over the coming years."

The authors had partly based their finding on a higher-than-expected absorption of heat by the world's oceans, he said, but other research has suggested this storage may reverse due to natural phenomena such as El Nino.

More information: Paper: [dx.doi.org/10.1038/ngeo1836](https://doi.org/10.1038/ngeo1836)

© 2013 AFP

Citation: Dire outlook despite global warming 'pause': study (2013, May 19) retrieved 3 May 2024 from <https://phys.org/news/2013-05-dire-outlook-global.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.