

Research says climate change undeniable

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International scientists have injected fresh evidence into [the debate over global warming](#), saying that climate change is “undeniable” and shows clear signs of “human fingerprints” in the first major piece of research since [the “Climategate” controversy](#).

The research, headed by the [US National Oceans and Atmospheric Administration](#), is based on new data not available for the UN’s [Intergovernmental Panel on Climate Change](#) report of 2007, the target of attacks by sceptics in recent years.

The NOAA study drew on up to 11 different indicators of climate, and found that each one pointed to a world that was warming owing to the influence of greenhouse gases, said Peter Stott, head of climate monitoring at the [UK’s Met Office](#), one of the agencies participating.

Seven indicators were rising, he said. These were: air temperature over land, sea-surface temperature, marine air temperature, sea level, ocean heat, humidity, and tropospheric temperature in the “active-weather” layer of the atmosphere closest to the earth’s surface. Four indicators were declining: Arctic sea ice, glaciers, spring snow cover in the northern hemisphere, and stratospheric temperatures.

Mr Stott said: “The whole of the climate system is acting in a way consistent with the effects of greenhouse gases.” “The fingerprints are clear,” he said. “The glaringly obvious explanation for this is warming from greenhouse gases.”

Some scientists hailed the study as a refutation of the claims made by climate sceptics during the “Climategate” saga. Those scandals involved accusations – some since proven correct – of flaws in the IPCC’s landmark 2007 report, and the release of hundreds of emails from climate scientists that appeared to show them distorting certain data.

“This confirms that while all of this [Climategate] was going on, the earth was continuing to warm. It shows that Climategate was a distraction, because it took the focus off what the science actually says,” said Bob Ward, policy director of the Grantham Institute at the London School of Economics.

But the report nonetheless remained the target of scorn for sceptics.

Myron Ebell, of the [Competitive Enterprise Institute](#) in the US, said the new report would not change people’s minds. “It’s clear that the scientific case for global warming alarmism is weak. The scientific case for [many of the claims] is unsound and we are finding out all the time how unsound it is.”

Pat Michaels, a prominent climate sceptic, ex-professor of environmental sciences and fellow of the Cato Institute in the US, said the NOAA study and other evidence

suggested that the computerised climate models had overestimated the sensitivity of the earth's temperature to carbon dioxide. This would mean that the earth could warm a little under the influence of greenhouse gases, but not by as much as the IPCC and others have predicted.

"I think it is the lack of frankness about this that emerged with Climategate, and that seems to continue [that make people doubt the findings]," he said.

Steve Goddard, a blogger, said the conclusion that the first half of 2010 showed a record high temperature was "based on incorrect, fabricated data" because the researchers involved did not have access to much information on Arctic temperatures.

David Herro, the financier, who follows climate science as a hobby, said NOAA also "lacks credibility".

But Jane Lubchenco, the administrator of NOAA, said the study found that the average temperature in the world had increased by 0.56° C (1° F) over the past 50 years. The rise "may seem small, but it has already altered our planet ... Glaciers and sea ice are melting, heavy rainfall is intensifying, and heat waves are more common."

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