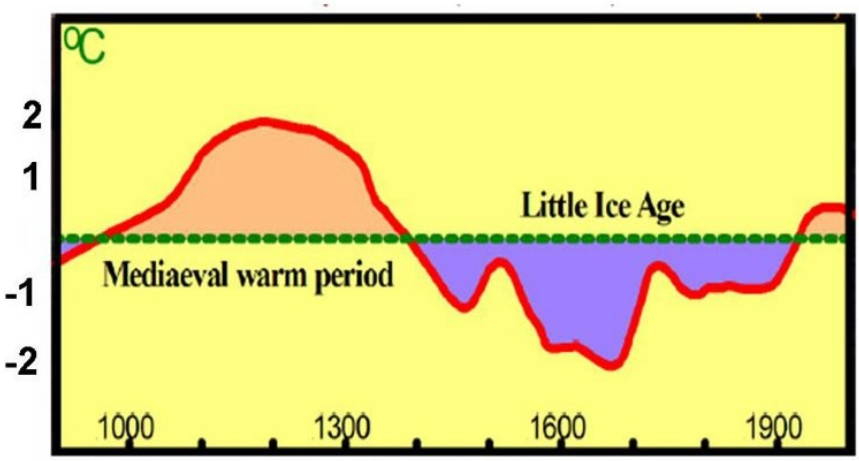
Four myths of climate sceptics

Richard Keech. http://www.mooneevalleyclimateaction.org/ version 1.1 April 2010

Myth 1: "We've seen temperatures this high or higher in the middle ages."

Some claim that this graph, with the authority of the IPCC, shows that for a time during the middle ages there were elevated temperatures comparable to those experienced today - the so-called "medieval warm period".

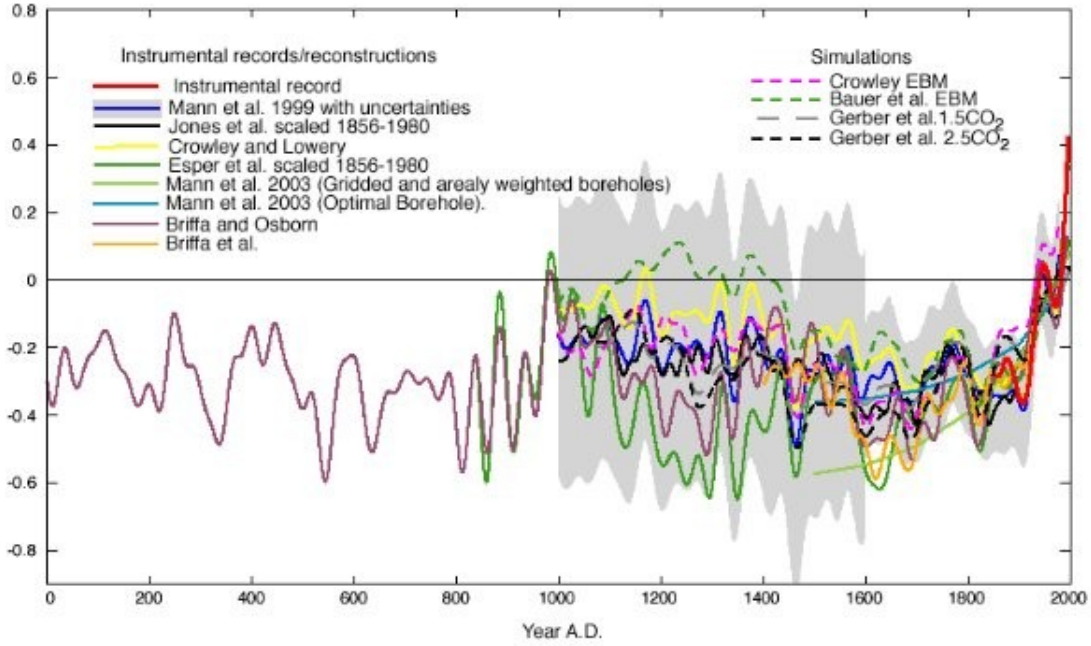


Medieval warm period? Yes. This drawing of a graph in the IPCC's 1990 report shows it clearly.

The facts

1. **Yes it was in an IPCC report.** This perspective of the Medieval Warm Period comes from English scientist Hubert Lamb from his 1966 book "The Changing Climate". It represented a Northern-European view only. The graph is believed to have been based on anecdotes and Lamb's personal perspectives. It was included in the IPCC's First Assessment Report (FAR) in 1990 for want of better data on climate history.

2. **The current understanding is very different.** Considerable work on the climate history of the last thousand years has been done since the FAR was prepared. Lamb's data has not stood the test of time. The current view on climate history looks more like this [2].



For more information

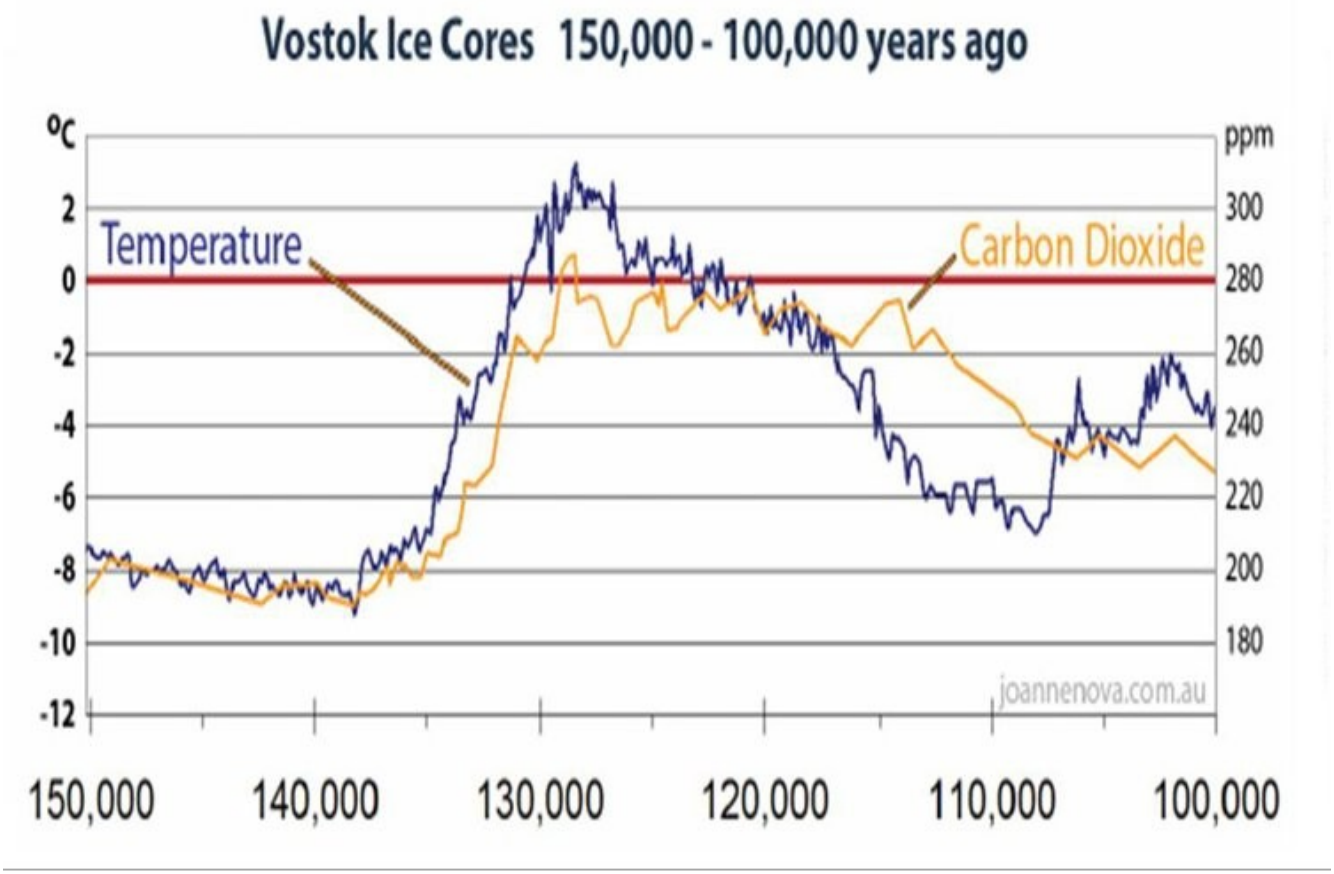
[1] "How Warm Was the Medieval Warm Period?" http://www.bioone.org/doi/abs/10.1579/0044-7447-29.1.51

[2] "Climate of the Last Millennium" Bradley 2003, http://stephenschneider.stanford.edu/Publications/PDF_Papers/Bradley.pdf

[3] IPCC Third Assessment Report Working Group 1 Section 2.3.3 http://www.ipcc.ch/ipccreports/tar/wg1/pdf/TAR-02.PDF

Myth 2: "Temperature change led past CO_2 change, so CO_2 cannot cause global warming."

Some like to say that the pattern of temperature change and CO_2 change coming out of the an earlier ice age show that temperature rise was followed by CO_2 rise, and therefore CO_2 rise cannot be the cause of human-caused global warming today.



The facts

1. Yes, temperature rise did precede CO_2 rise by about 800 years. It is generally understood that the trigger for previous de-glaciations was orbital variation know as Milankovic cycles.

2. During previous de-glaciations "CO_2 plays, through its greenhouse effect, a key role in amplifying the initial orbital forcing" [4].

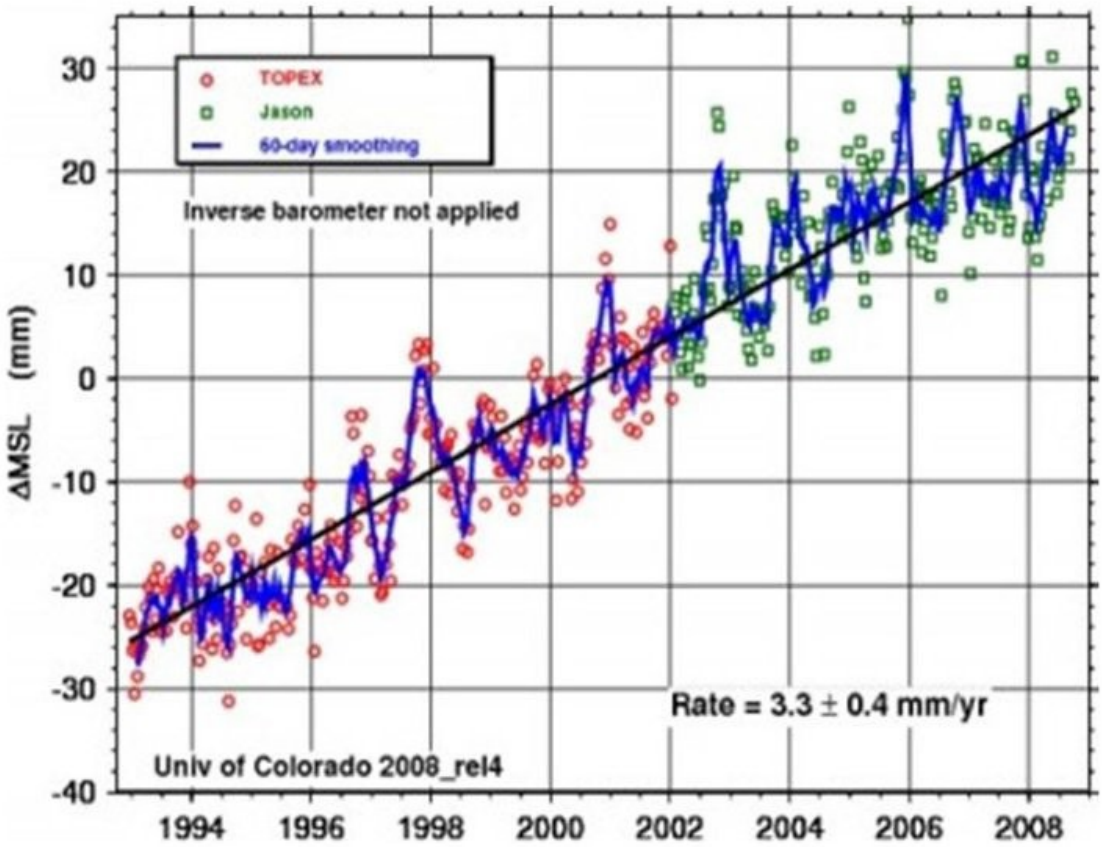
3. This sequence of events is still in full agreement with the principal of anthropogenic climate change arising from greenhouse-gas emissions. The fact that GHG's weren't the trigger before does not mean they aren't the trigger now.

For more information

[4] "Timing of Atmospheric CO2 and Antarctic Temperature Changes..." Caillon et al, Science, 2003. http://www.sciencemag.org/cgi/content/abstract/299/5613/1728

Myth 3: "Sea level change will be small. Even the IPCC says it will be less than 0.59m by 2100."

Some say that there is a disconnect between 1) that the IPCC predicts a mere 0.59m worst-case increase by the end of the century and 2) that Al Gore suggests a risk of sea-level rise of many meters.



The facts

1. The IPCC's figure of sea-level rise <0.59m is for glacial runoff and thermal expansion only [5].

2. Recent scientific analysis puts the likely range of sea-level rise by 2100 as 0.8 - 2.0 m [6].

3. Respected climate scientist James Hanson said "There's enough CO_2 in these fossil fuels to take us back to before there was any ice". This corresponds to a sea-level rise of over 70m [7].

For more information

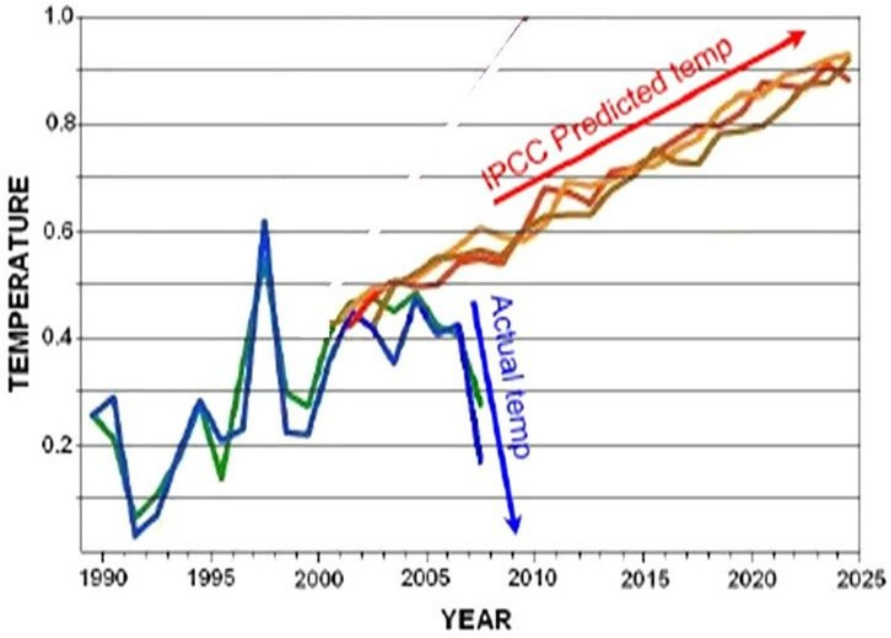
[5] www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf Table SPM3, page 13.

[6] http://www.sciencemag.org/cgi/content/abstract/321/5894/1340

[7] http://climateprogress.org/2008/11/09/stabilize-at-350-ppm-or-risk-ice-free-planet-warn-nasa-yale-sheffield-versailles-boston-et-al/

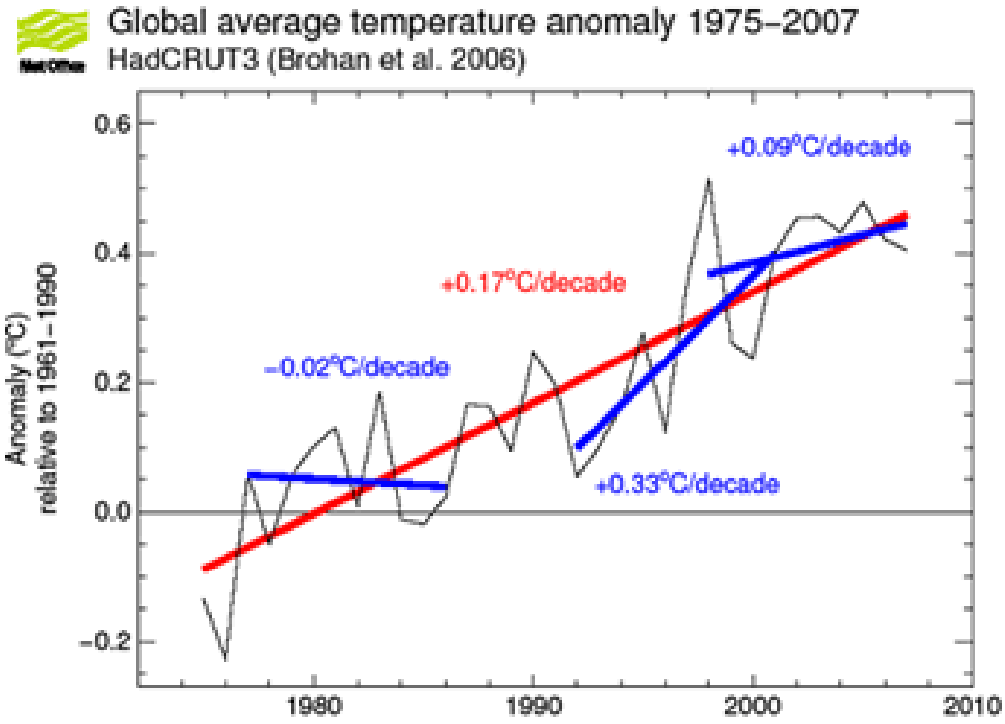
Myth 4: "The temperature is not rising."

Some claim that global warming peaked in 1998 and that the temperature is now trending downwards and use diagrams like this to make their point.



The facts

According to the UK Met Office "Over the last ten years, global temperatures have warmed more slowly than the long-term trend. But this does not mean that global warming has slowed down or even stopped. It is entirely consistent with our understanding of natural fluctuations of the climate within a trend of continued long-term warming" [8].



For more information

[8] "Global Warming Goes On", UK Met Office, September 2008
http://www.metoffice.gov.uk/corporate/pressoffice/2008/pr20080923c.html