

The New Trend in Climate Alarmism

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Senator Steve Fielding recently asked the Climate Change Minister Penny Wong why human emissions can be blamed for global warming, given that air temperatures peaked in 1998 and began a cooling trend in 2002, while carbon dioxide levels have risen 5% since 1998. I was one of the four independent scientists Fielding chose to accompany him to visit the Minister.¹

The Minister's advisor essentially told us that short term trends in air temperatures are irrelevant, and to instead focus on the rapidly rising ocean heat content:

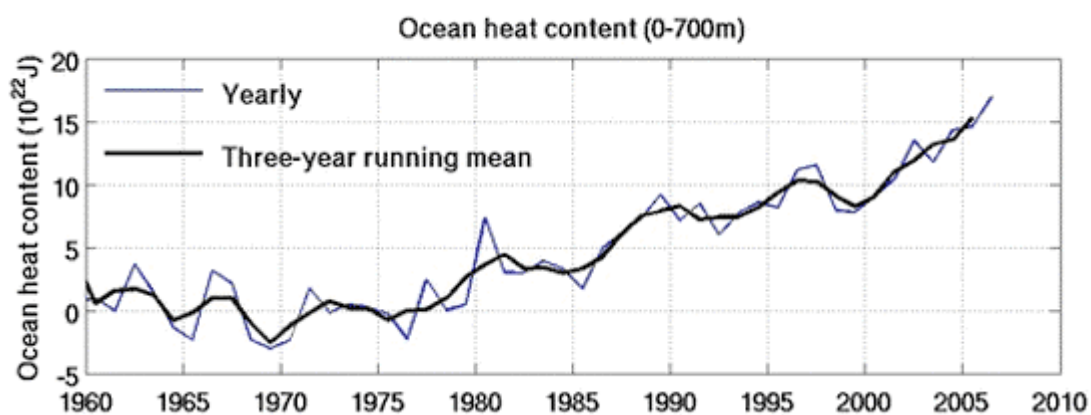


Figure 1: Wong's graph. www.environment.gov.au/minister/wong/2009/tr20090624c.html

This is the new trend in climate alarmism. Previously the measure of global warming has always been air temperatures. But all the satellite data says air temperatures have been in a mild down trend starting 2002.² The land thermometers preferred by the alarmists showed warming until 2006, but even they show a cooling trend developing since then.³ (Land thermometers cannot be trusted because, even in the USA, 89% of them fail siting guidelines that they be more than 30 meters from an artificial heating or radiating/reflecting heat source, and their data is forever being "corrected".⁴)

Ocean temperatures were not properly measured until mid-2003, when the [Argo network](#) became operational.

Before Argo, ocean temperatures were measured with bathythermographs (XBTs)—expendable probes fired into the water by a gun from ships along the main commercial shipping lanes. Geographical coverage of the world's oceans was poor, XBTs do not go as deep as Argo, and their data is much less accurate.⁵

The Argo network consists of over 3,000 small, drifting oceanic robot probes, floating around all of the world's oceans. Argo floats duck dive down to 1,000 meters or more, record temperatures, then come up and radio back the results.

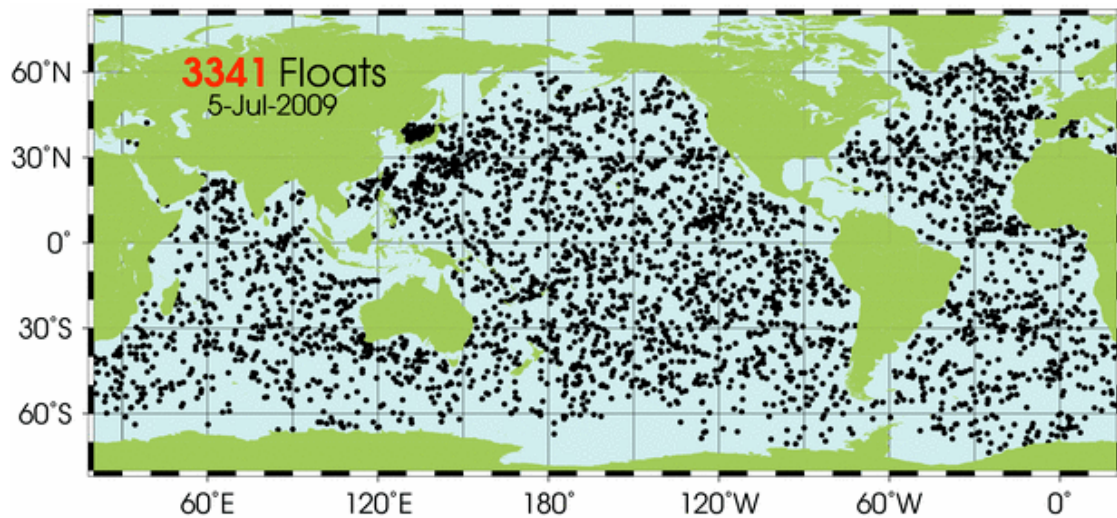


Figure 2: The Argo network has floats measuring temperature in all of the oceans. www.argo.ucsd.edu/About_Argo.html

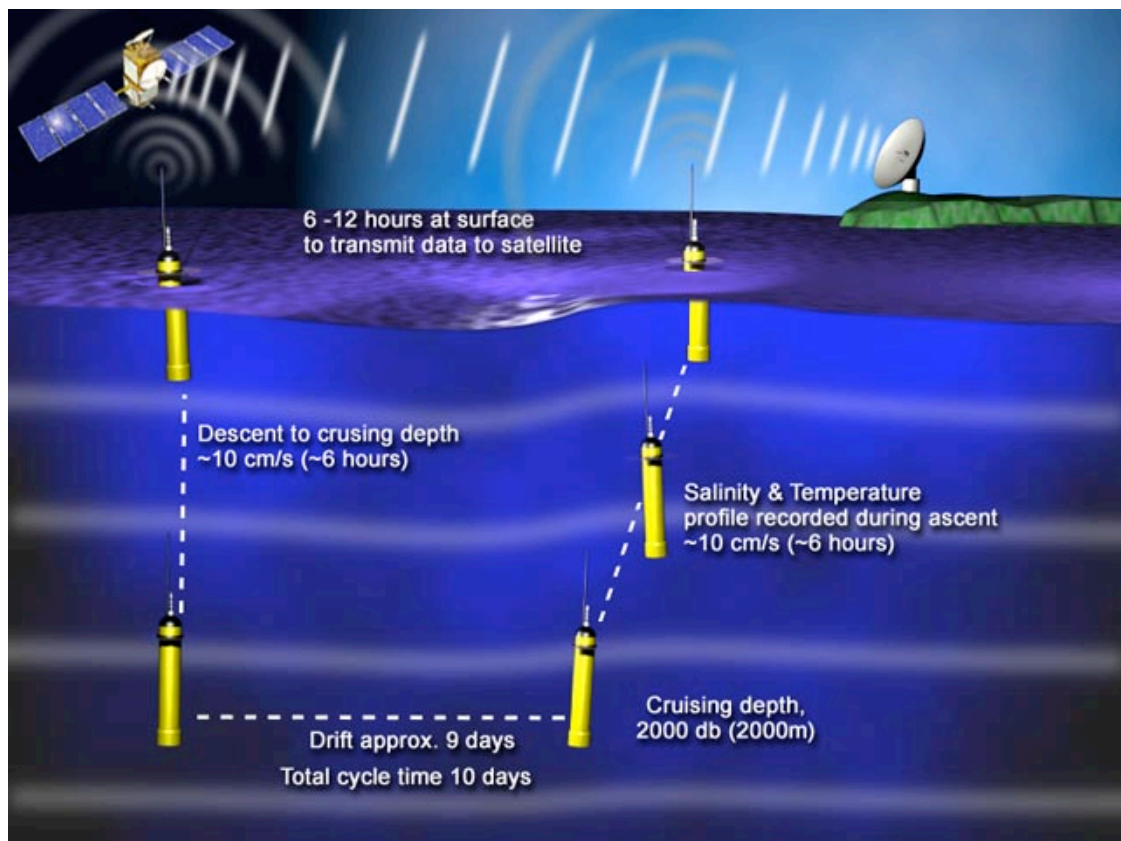


Figure 3: An Argo float descends to cruising depth, drifts for a few days, ascends while recording temperatures, then transmits data to satellites. www.argo.ucsd.edu/smo.html

The Argo data shows that the oceans have been in a slight cooling trend since at least late-2004, and possibly as far back as mid-2003 when the Argo network started:

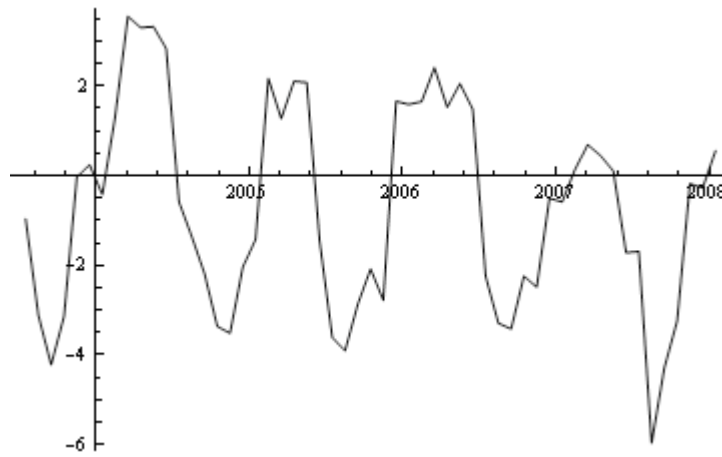


Figure 4: Ocean heat content from mid 2003 to early 2008, as measured by the Argo network, for 0 – 700 meters. There is seasonal fluctuation because the oceans are mainly in the southern hemisphere, but the trend can be judged from the highs and lows. (This shows the recalibrated data, **after** the data from certain instruments with a cool bias were removed. Initial Argo results showing strong cooling.)
www.ncasi.org/publications/Detail.aspx?id=3152

Josh Willis of NASA's Jet Propulsion Laboratory, in charge of the Argo data, [said in March 2008](#): "There has been a very slight cooling, but not anything really significant".

The ocean data that the alarmists are relying on to establish their warming trends is all pre-Argo, from XBTs. Now that we are measuring ocean temperatures properly, the warming trend has disappeared. And by coincidence, it disappeared just when we started measuring it properly!

Notice how the Minister's graph above shows rising ocean heat content for 2004 through 2006, but the Argo data shows a cooling trend? There is a problem here.

The Argo data is extraordinarily difficult to find on the Internet. There is no official or unofficial website showing the latest ocean temperature. Basically the only way to get the data is to ask Josh Willis (above). The graph above come from Craig Loehle, who got the data from Willis, analysed it, and put the results in a peer reviewed paper available on the Internet. Given the importance of the ocean temperatures, don't you think this is extraordinary? If the Argo data showed a warming trend, don't you suppose it would be publicized endlessly?

So what's going on? Our best data, from satellites and Argo, says that both the air and oceans have not warmed for at least five years now. In the short term, some cooling force is overpowering the warming due to human emissions.

Let's look at the long-term trend. The medieval warm period around AD 1000 – 1300 was a little warmer than now: crops grew in Greenland, and there were many signs around the world of extra warmth during that period. That gave way to the bitter cold of the little ice age from 1400 to 1800: animals in Europe died from cold even inside barns, and the River Thames in London would freeze over every winter (it last froze over in 1804).

Global air temperatures have been rising at a steady trend rate of 0.5°C per century since about 1750, as the world recovers from the little ice age:

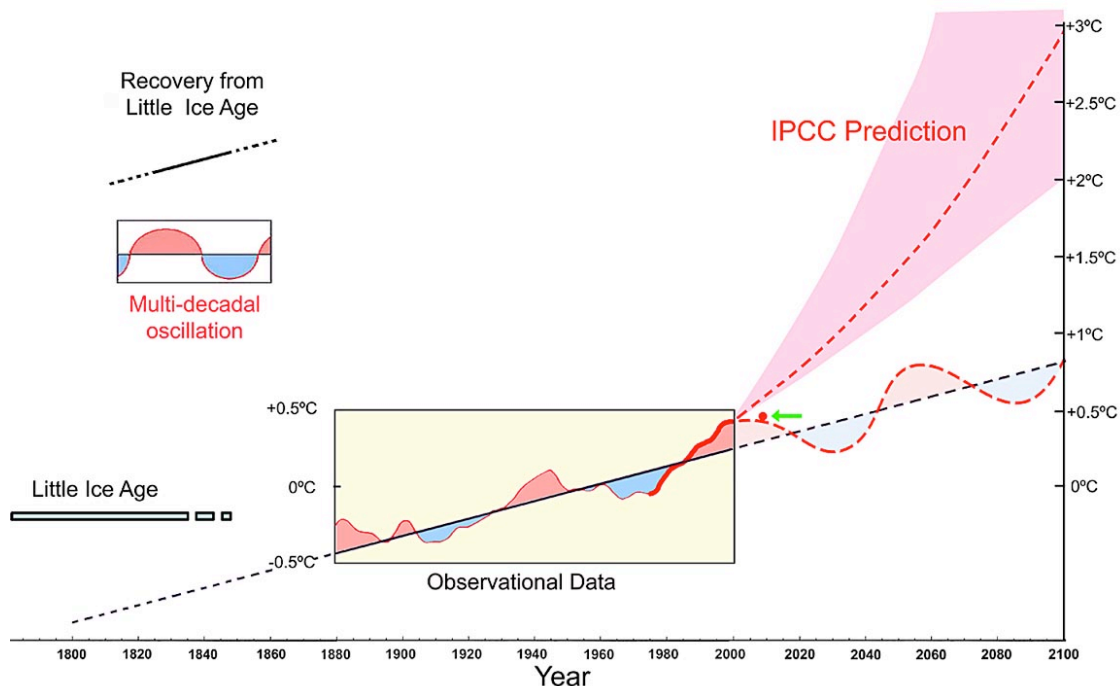


Figure 5: Reasonable global air temperature data only goes back to 1880. This analysis into a steady rising trend and oscillations is simply an empirical observation, by Dr Syun Akasofu. The IPCC predictions are their widely publicised 2001 predictions.
people.iarc.uaf.edu/~sakasofu/pdf/two_natural_components_recent_climate_change.pdf

On top of that trend are oscillations that last about thirty years in each direction:

- 1882 – 1910 Cooling
- 1910 – 1944 Warming
- 1944 – 1975 Cooling
- 1975 – 2001 Warming

In 2009 we are where the green arrow points in Figure 5, with temperature levelling off and beginning to fall slightly. The pattern suggests that the world has entered a period of cooling until about 2030.

The long-term trend suggests that the last warming period (1975 – 2001) was like the previous one (1910 – 1944), and that once the effects of the little ice age have finally passed, the temperature will get back to where it was in the medieval warm period (which is also where it was during the Roman Optimum, and in the Holocene optimum before that).

What about human influence? Human emissions of CO₂ were virtually non-existent before 1850, and were insignificant compared to current levels until after 1945.⁶ It is worth bearing in mind that there is no actual evidence that carbon dioxide was the main cause of recent warming—it's only an assumption, and the calculations of future temperature rises derive most of their warming from an assumed water vapor feedback for which there is only counter-evidence.⁷

¹ A personal account of the meeting: joannenova.com.au/2009/06/19/the-wong-fielding-meeting-on-global-warming. The documents about that meeting: joannenova.com.au/global-warming/the-wong-fielding-meeting-on-global-warming-documents.

² Satellites work 24/7 measuring broad swathes of air over both land and ocean, but satellite data only goes back to 1979. Three of the four global temperature records use satellite data:

www.junkscience.com/MSU_Temps/RSSglobe.html

www.junkscience.com/MSU_Temps/UAHMSUglobe.html

www.junkscience.com/MSU_Temps/HadCRUG.html.

Note the warmest year was 1998, the warming trend to 2001, and the cooling trend from 2002.

³ Land thermometers suffer from the urban heat island effect and “corrections”. Only one of the four global temperature records uses land thermometers exclusively:

www.junkscience.com/MSU_Temps/GISSglobal.html.

It claims the warmest year was 2006 and the warming trend went to 2006.

⁴ wattsupwiththat.files.wordpress.com/2009/05/surfacestationsreport_spring09.pdf

www.surfacestations.org

cdiac.ornl.gov/epubs/ndp/ushcn/ndp019.html

⁵ www.metoffice.gov.uk/weather/marine/observations/gathering_data/argo.html

www.argo.ucsd.edu/Novel_argo.html

⁶ Figures 2 and 3 at www.oism.org/pproject/s33p36.htm

⁷ sciencespeak.com/NoEvidence.pdf

sciencespeak.com/MissingSignature.pdf