

State of the CSIRO and BOM: Are we getting good climate science advice?

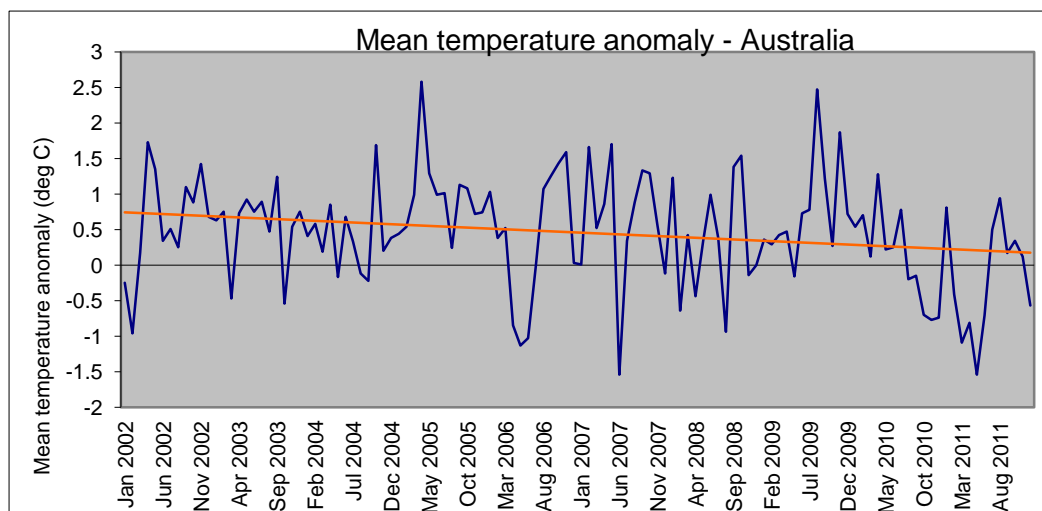
There have been 2 recent reports released by the CSIRO and the Bureau of Meteorology [BOM]. The first is the [BOM Annual Climate Summary 2011](#). The second is a joint effort of CSIRO and BOM, the [State of the Climate – 2012 report](#)

It is this information from the BOM and CSIRO which provides justification for the introduction of the various anti global warming policies. So how reliable is this information from our 2 premier scientific research institutions?

About its 2011 report David Jones on behalf of BOM says:

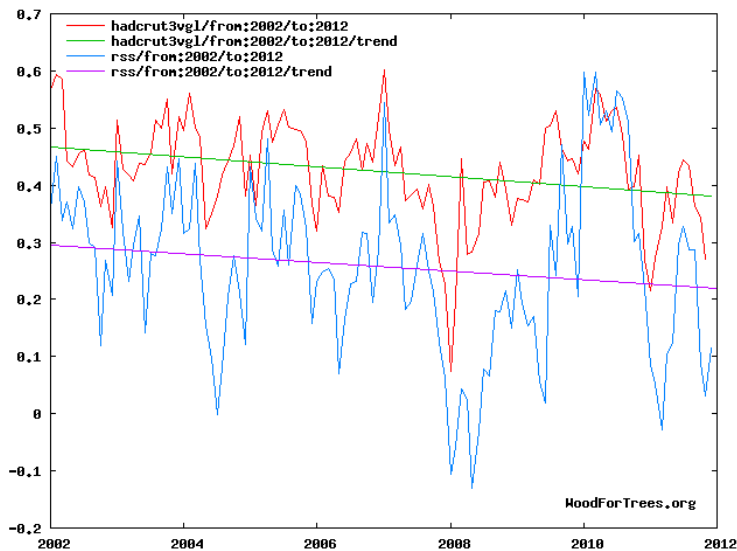
[“Australia was the only continent to record cooling and the nation’s 10-year average trend was still up”](#)

This is a statement which is misleading in what it doesn’t say. For instance, the 10 year average temperature trend, based on the BOM’s own data, from January 2002 to December 2011, is this:



Clearly, the trend is down over this period regardless of whether this 10 year period is warmer than the preceding 10 year period.

In respect of Australia being the only continent to experience cooling over 2011, how then to explain this:

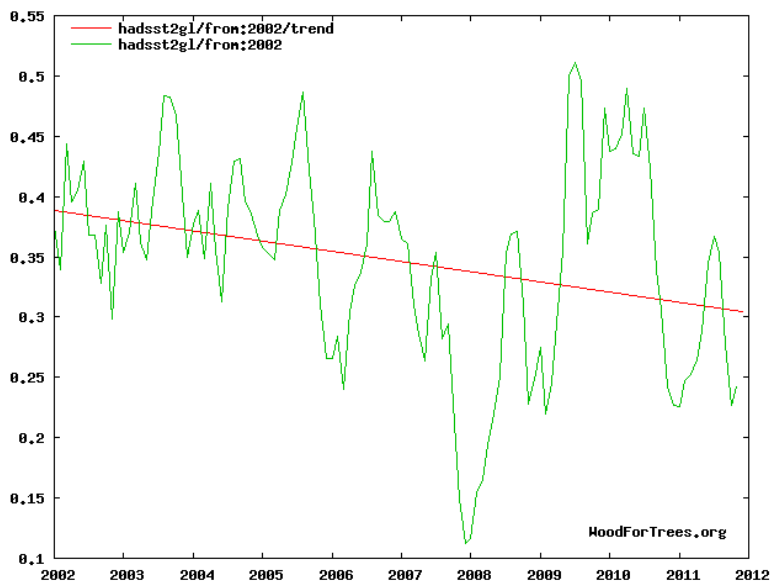


As can be seen the trend in the Global Average Temperature [GAT] is clearly down and in 2011 GAT fell markedly. This down trend is clear in both the land based temperature [green] and the satellite temperature [purple]. How can Australia have been the only continent to cool in 2011 when GAT shows the whole world cooled?

Karl Braganza of the BOM also noted this in respect of the report:

[“Ocean temperatures – the warmest on record over the past two years – had actually assisted Australia’s heavy rainfall and cooler temperatures”](#)

The clear implication from this is that the ocean is warming; it is not:



As can be seen there was a spike in the world’s sea surface temperature in 2009-2011, which is consistent with the BOM statement, but what is also plain is that the overall trend in sea surface temperature, over the last 10 years is down, further contradicting global warming.

In respect of the claim that the spike in ocean warming may have “assisted” Australia’s “heavy rainfall” professor [Stewart Franks rebuts](#) this by observing that a 0.5C increase in water temperature in the Indian Ocean will produce an increase in evaporation of 3% which is insufficient to explain the

recent floods. What in fact did produce the floods was a change to La Nina conditions which pushed the rainfall further onto the Australian continent; all perfectly natural.

The second State of the Climate – 2012 report also represents these problematic temperature and rainfall conclusions. Its main point, however, has tended to be overlooked.

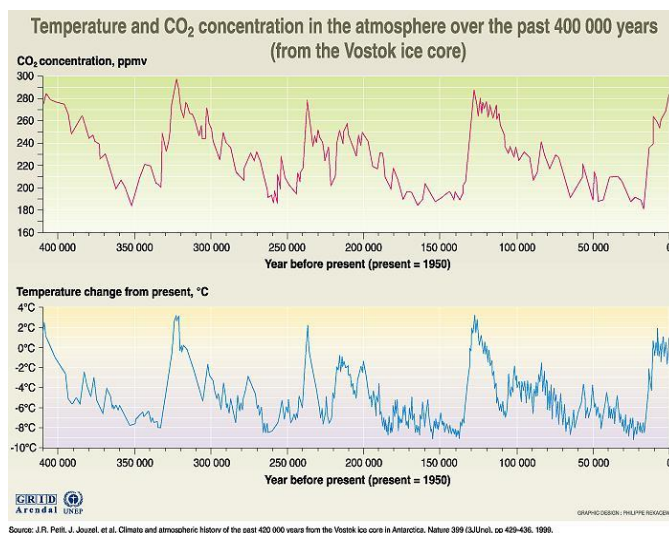
The report says atmospheric concentrations of CO₂ are the [highest in 800,000 years](#). They rely on ice-core records to claim this. The definitive paper on ice-core based records of CO₂ over the last 800,000 years is by [Luthi et al.](#) Luthi looks at all the ice-core records and generally finds a maximum of 300 parts per million [ppm] for this period. Currently the CSIRO/BOM have noted the CO₂ concentration is 390ppm.

However, Luthi note there are pockets of CO₂ concentration which range from 264 and 477 ppm. Luthi calls this a “large scattering” but regards it as an outlier from the normal range caused by a defect in the drilling process.

But how accurate are the methods used to interpret past concentrations of CO₂? Ice core expert Professor Zbigniew Jaworowski explains the inherent defects of ice core extraction of CO₂ samples [here](#). Basically the pressure of the ice weight can cause the CO₂ contained in the ice core to be ‘squeezed’ out of the ice. This has 2 effects. Firstly this leaves less CO₂ in the older ice samples creating the impression of less concentration in the past.

Secondly, the CO₂ squeezed out can pool and give anomalously high readings in other parts of the ice samples; as Luthi found. A paper which takes this effect into account when looking at the ice record is by [Drake](#). Figure 4 of Drake clearly shows that when adjustment is made for the measurement defects Jaworowski has highlighted prior levels of CO₂ were not that different from today.

But let’s assume the CSIRO/BOM comment is right and that current CO₂ levels are exceptional over the last 800,000 years. What relevance does that have for temperature? The graph below shows ‘official’ CO₂ and temperature over the last 400,000 years.



The high-points in the temperature graph show the past short interglacial periods similar to the one we are now in.

The temperatures in the previous interglacial periods are up to 3C higher than they are today but CO2 levels were LESS than they are today. A recent peer reviewed paper has re-calculated the 'official' temperatures in these previous interglacial periods at up to [at least 6C higher than today.](#)

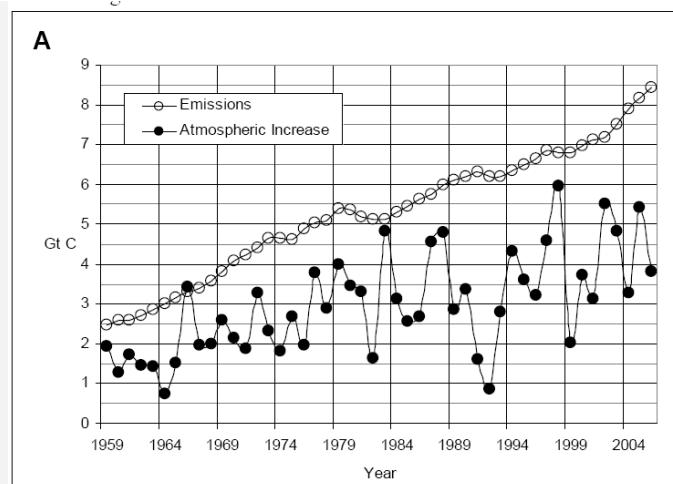
So, if we accept what the CSIRO/BOM is saying and the record of past CO2 is correct it means LESS CO2 is associated with HIGHER temperatures.

In other words the claim by the CSIRO/BOM does not support AGW, it tends to undermine it.

Furthermore, even if current CO2 levels are the highest for 800,000 years there is no certainty that human emissions of CO2 [ACO2] are responsible for all the modern increase. The [Knorr](#) paper shows that the % of airborne fraction of ACO2 has essentially not changed in 150 years.

A simple calculation shows how ACO2 cannot be responsible for all CO2 increase. If CO2 is 100ppm and ACO2 is 20% or 20ppm then if CO2 doubles to 200ppm ACO2 must be still 20% or 40ppm but CO2 from other sources must have increased from 80ppm to 160ppm.

[Professor Murray Salby and Dr Tom Quirk](#) also explain why ACO2 has little to do with increasing concentrations of CO2:



Tom Quirk: Sources and Sinks of CO2

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CO2 variations do not correlate with man-made emissions. Peaks and falls correlate with hot years (e.g. 1998) and cold years (1991-92).

The significance of this is that even if you believe, as CSIRO/BOM apparently does, that CO2 causes global warming and catastrophic climate change it is likely that the increase in CO2 is not caused by humans.

If this is the case then policy to solve global warming based on curbing human emissions of CO2 such as the carbon tax will have negligible to no effect on any global warming. That conclusion should be part of the CSIRO and BOM reporting.