

Global warming: Is the science settled?



Climate change policy Plan A hasn't worked and won't work: what's Plan B?

By Bob Carter

Professor Bob Carter, geologist and environmental scientist, summarizes the real evidence for and against dangerous climate change.

The allegation that dangerous global warming is being caused by human carbon dioxide emissions has become an overwhelming political issue of our times. The commentariat, mostly innocent of knowledge about scientific matters, allege that “the science is settled”. To the degree that they are right, that settlement is not in the direction that conventional wisdom would seem to dictate.

For the global warming idea (or hypothesis as scientists like to term it) makes specific predictions. The simplest of these depends upon the fact that carbon dioxide is a mild greenhouse gas. It then follows that as the amount of carbon dioxide increases in the atmosphere due to human emissions, so too should the temperature warm. This first-principle reasoning is undeniably sound.

What, then, do we observe? Considering global surface temperature since 1979, we find that it has increased by a few tenths of a degree up until 1998, this being the much-vaunted late 20th century warming that was supposed to be so scary. Then from 1998 to 2008 the temperature gently cooled. All the while, from 1979 to 2008, atmospheric carbon dioxide levels were increasing. A specific result is that whilst carbon dioxide levels *increased* by 5% after 1998, global temperatures have *decreased*. Not only has dangerous warming not occurred for ten

years in the face of rising emissions, but neither has there been any warming at all. Similarly, during the earlier period 1940-1975, global temperature again declined at the same time that emissions increased rapidly.

These simple facts comprise two experimental tests of the greenhouse hypothesis, which it fails. They also point to a further conclusion, namely – remembering that carbon dioxide is undeniably a mild greenhouse gas – that the amount of warming produced by its increase is unmeasurably small alongside the large natural variations that occur in the climate system.

The reason for this is well understood, and is because the relationship between increasing carbon dioxide and increasing temperature is logarithmic in nature, meaning that each additional increment of gas causes a diminishing amount of warming; i.e. you get less bang for every additional buck. Thus to increase the temperature of the Earth by more than about 1°C by this mechanism would require more than a doubling of atmospheric carbon dioxide. In turn, that would require burning more hydrocarbons than are known to exist on the planet. In short, despite all the media hype there is no likelihood that human carbon dioxide emissions will cause future dangerous warming.

A second prediction regarding human-caused greenhouse warming comes from computer models, all of which agree in projecting a particular fingerprint pattern for

such warming. The pattern is that warming should be concentrated at heights around 10 km in tropical regions, and also at the surface at the two poles. A second test of the warming hypothesis, then, is to compare these predictions with reality. Again, the hypothesis fails, for the brief warming phase that terminated the 20th century was stronger at the surface than higher in the atmosphere, and the temperature at the South Pole declined rather than warmed.

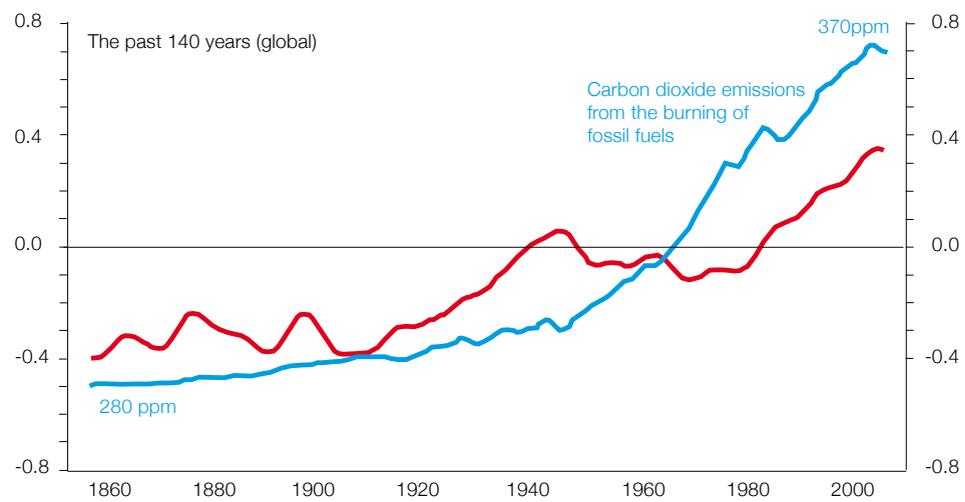
Other tests of the global warming hypothesis also falsify it, to the degree that it is indeed fair to say “the science is settled”. And what is settled is that the human global effect on climate from carbon dioxide emissions is tiny, falls within the noise of the natural variability of the climate system, and cannot be shown to be, nor is likely to become, dangerous.

Now you may have been surprised to hear all this, for the UN's Intergovernmental Panel on Climate Change (IPCC) has long been issuing scary warnings that up to 6°C of warming may occur for a doubling of carbon dioxide over pre-industrial levels, and the media's mainly left-liberal journalists are always swift to ramp up environmental scare stories. But these high IPCC values are wrong, and can only be contrived using computer models that assume a high positive feedback from water vapour.

Yet thanks to a brilliant marketing and public relations campaign by the IPCC, in concert with environmental NGOs and



Departures in Temperature in degrees C from the 1961-1990 average



Global temperature decreased between 1940 and 1979 at the same time as CO2 emissions were rising most rapidly

other self-interested parties, governments the world over have become convinced that dangerous warming will occur unless steps are taken to decrease human carbon dioxide emissions.

Meanwhile, the virtual reality computer model results that have so convinced governments were not only inadequate “evidence” for dangerous warming in the first place, but are now also known to be wrong. For all models projected a steady increase in temperature from 1990 through to 2008 in the face of an actual temperature path that warmed for the first eight years and cooled for the last ten.

Does this mean that we no longer have a human-caused global warming problem? Well, yes it does. So we don’t need to worry about climate change any more, then? Unfortunately, no - for reasons that I will now explain.

In 2005, America had a wake-up call to the power of natural climate events, when hurricane Katrina swept through New Orleans with the loss of 1836 lives, negative effects on the lives of 15 million people and US\$110 billion in estimated damages. Australia’s turn came in February 2009, with simultaneous firestorms in the southeast and monsoonal flooding in the north of the continent, and an accompanying loss of more than 170 lives (mostly in the bushfires) and property damage that again amounted to many billions of dollars.

The IPCC’s Plan A – which is to “prevent” hypothetical human global warming by reducing human carbon dioxide emissions – completely ignores these much greater and all too non-hypothetical dangers and costs of natural climate change.

Thus in dealing with the real as opposed to the imaginary world, Plan A hasn’t worked, won’t work and can’t work.

Plan A hasn’t worked because the Kyoto Protocol has been a complete failure, and will have no measurable effect on future climate whatever. It won’t work because the experience of early-mover countries is that carbon dioxide taxation at any reasonable tax level will not inhibit emissions; for

example, Norway has had a tax of between \$15 and \$25/ton since the early 1990s, with the inefficacious result that carbon dioxide emissions have increased by 15%. And, finally, it *can’t work* because the logarithmic relationship between increasing carbon dioxide and increasing temperature means that even if the world did commit many trillions of dollars to post-Kyoto emissions inhibition, the effect on future climate would still be all but unmeasurable; as an example, even if Australia cut all of its emissions, the theoretical warming prevented would be less than one-thousandth of a degree.

Meanwhile, as signalled by this year’s Australian bushfires and floods, natural climate events and change remain a deadly threat.

Writing in *The Australian* on March 17th, the economist and former Deputy-Secretary of the Treasury, Geoff Carmody, dismissed the Australian government’s current plans to introduce an emissions trading scheme as unworkable on both economic and political grounds, asserting that “we need a new policy base for climate change”. Mr Carmody is right for more reasons than he knows, for, as I have outlined above, carbon dioxide taxation is also a dead parrot on scientific grounds.

The alternative climate policy that Mr Carmody seeks must address real, not imaginary, climate risks, for dealing with future climate change is primarily a matter of risk appraisal. It is certain that natural climate events are going to continue, and that from time to time human and environmental damage will be wrought. Future changes will include cooling trends, warming trends and sudden step-events. Extreme weather or climate events (and their consequences) are natural disasters of similar character to earthquakes, tsunami and volcanic eruptions, in that in our present state of knowledge they can neither be predicted far ahead nor prevented once they are underway.

Climate policy Plan B therefore has to include strengthened research into past natural climate changes, in order to better

understand, and in some cases perhaps even predict, similar changes to come, together with the development of improved mechanisms for responding and adapting to climate hazards as and when they occur. The latter function might best be achieved through better co-ordination and strengthening of the civil defence agencies that presently deal with weather and climate disasters.

Such a Plan B policy will cost orders of magnitude less than a fundamentally misconceived carbon dioxide taxation scheme. And at the same time that it prepares us to cope with natural disasters, Plan B will also ensure our ability to cope too with human-caused climate change, should any eventuate.

The great danger of the current public hysteria over speculative human-caused global warming is that, wilfully disguised as a “climate change” problem, warming alarmism has removed attention and funding from the real problem that requires a policy solution. That problem is natural climate change and events, and it is long since time that we addressed it better.

Plan B is, as it needs to be, precautionary. For a society that has prepared itself to cope properly with the weather and climate changes that Nature herself imposes will, by that very fact, have taken the precaution of being well prepared to cope with human-caused change too.

Professor Bob Carter is an independent Australian palaeoclimate scientist. He has published more than 100 research papers in refereed journals, and appeared as an expert witness on global warming before the NZ parliament, the U.S. Senate and the U.K. High Court in the case of Dimmock v. Gore. Other articles that expand this account (no’s 92, 95 and 115) and additional web links on climate change are listed at his website, at: http://members.iinet.net.au/~glrmc/new_page_1.htm