

# THEY DO PROTEST TOO MUCH

Extremist blogs unfairly criticize SPPI's *Monthly CO2 Reports*

by Christopher Monckton of Brenchley



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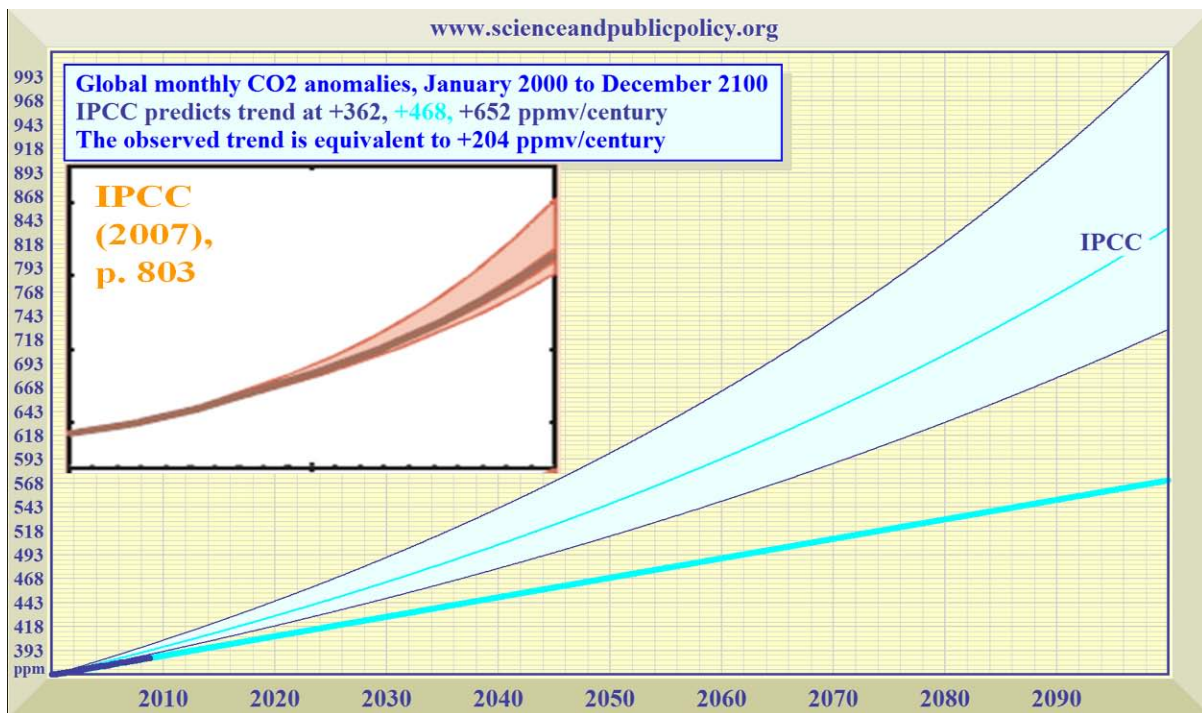
by Christopher Monckton of Brenchley | August 16, 2010

SPPI's authoritative *Monthly CO2 Reports* have been providing hard, real-world data about changes in CO2 concentration, temperature, sea ice, hurricane activity, and many other climate indicators for two years. These regular reports, now widely cited on television, in universities, and in Congress, have proven highly embarrassing to climate extremists. Our graphs show that the climate is responding normally, and that neither CO2 concentration nor temperature is rising anything like as fast as the UN's climate panel had predicted.

Now the extremists are seeking to dismiss our CO2 concentration and temperature graphs as incorrect in various respects. This short note answers some of the inappropriate criticisms currently circulating on the extremist blogs.

**Allegation 1:** The light-blue zones on the SPPI CO2 concentration graphs, which we say are a fair representation of the IPCC's predicted path for CO2 concentration growth on the assumption that emissions continue to increase in accordance with the A2 emissions scenario, are said to be incorrect in that they do not match the IPCC's prediction, which in any event ought to be called a "projection".

**Answer:** On the SPPI graph below, we have inset the IPCC's own graph of CO2 concentration growth on the A2 scenario. The zones of prediction are manifestly near-identical. We do not propose to engage in semantic quibbles about whether the word "projection" would be better than the word "prediction" when describing the IPCC's predictions: the captions on our graphs make it sufficiently clear that the basis of our graphs is the IPCC's A2 emissions scenario, which we reasonably use because it is closest to actual emissions over recent years.



**Allegation 2:** It is said that we unreasonably say that because CO<sub>2</sub> concentration has been rising in a straight line for a decade it may continue to rise in a straight line for the rest of this century, and that over a period as short as a decade or less it is impossible to distinguish a linear trend from an exponential trend such as that predicted by the IPCC on the A2 scenario.

**Answer:** Our detractors admit that on our CO<sub>2</sub> concentration graph we correctly plot the least-squares linear-regression trend on the actual NOAA data, which we also correctly plot. However, they say we should not draw the conclusion that the data are trending towards mere linearity. In fact, we performed a simple but powerful statistical test before drawing that conclusion: we calculated the linear-regression trends over successively longer periods to see whether the slope of the trend progressively increased (as it must if the curve is genuinely exponential); but, in recent years, the trend has ceased to increase. It is suggested that we did the test incorrectly, because a climate-extremist performed a similar test on the Mauna Loa CO<sub>2</sub> concentration dataset and came up with a different result. However, as our detractors ought to have realized, the Mauna Loa dataset, taken from a single location intermittently perturbed by regional volcanic activity, is not the same dataset as the NOAA dataset that we used. Accordingly, we are unimpressed by their reliance upon an entirely different dataset.

**Allegation 3:** It is said that we use graphs showing that global temperatures have been falling since 2001 to support what is called our “claim that the climate models are wildly inaccurate”, and that we have plotted predictions of *equilibrium* temperature change rather than of the lesser *transient* temperature change that the IPCC actually predicts.

**Answer:** As any edition of the *Monthly CO<sub>2</sub> Report* will show, we produce graphs starting not only in 2001, at the turn of the millennium (which have until recently shown temperatures on a falling trend) but also in 1980 (which show temperatures rising at about 1.5 K/century). Nor do our *Monthly CO<sub>2</sub> Reports* usually draw any conclusions about whether “climate models are wildly inaccurate”: for the purpose of the reports is simply to present the data. Of course, there is considerable evidence in the literature that the models unwisely relied upon by the IPCC do tend heavily to over-predict future “global warming”. Furthermore, the notes accompanying our monthly graphs make it quite explicit that we are plotting predictions of equilibrium rather than transient temperature, so any reader of our reports can make allowance for that fact. We justify this decision by noting that, on the A2 scenario, by 2100 the *transient* warming predicted by the IPCC is 3.4 K, while the *equilibrium* warming generated by the IPCC’s own formula based on its central estimate of CO<sub>2</sub> concentration growth on the same scenario is not a great deal higher, at 3.86 K. Also, it may or may not be true that any distinction between transient and equilibrium warming actually exists. A change to plotting the IPCC’s transient-warming predictions, which we make this month, will still show the long-run temperature trend since 1980 scraping along the bottom of the IPCC’s range of predictions.

We do appreciate that climate-extremists find our graphs uncomfortable. Since we first began to produce the *Monthly CO<sub>2</sub> Reports*, the extremists have not been able to get away with the suggestion, often made before, that “global warming is far worse than predicted”. As our graphs have compellingly and accurately demonstrated, warming is far *less* severe than predicted. That, whether the extremists like it or not, is the truth, and our graphs will unashamedly continue to demonstrate it, for as long as it remains true.



## APPENDIX A

### MONCKTON: WHY CURRENT TRENDS ARE NOT ALARMING

(Posted on [August 14, 2010](#) by [Anthony Watts](#).)

*Since there has been a lot of discussion about Monckton here and elsewhere, I've offered him the opportunity to present his views here. – Anthony*

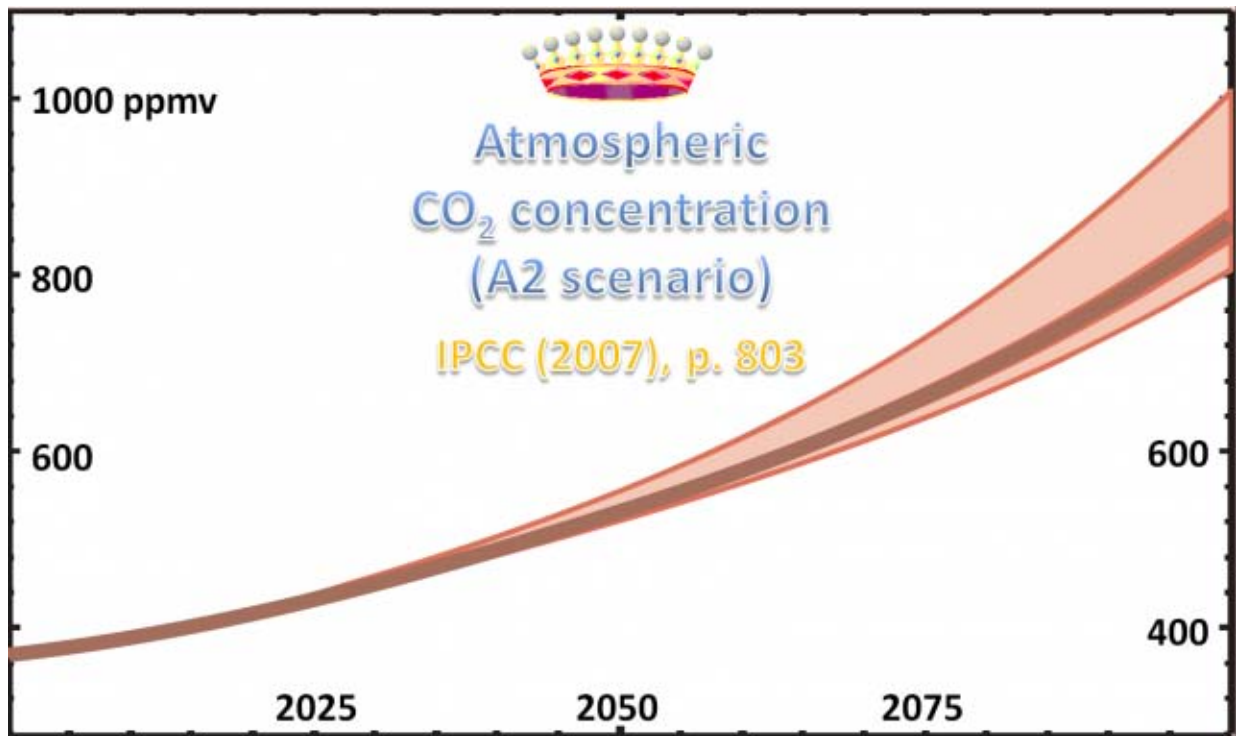
#### Guest post by Christopher Monckton of Brenchley



At [www.scienceandpublicpolicy.org](http://www.scienceandpublicpolicy.org) I publish a widely-circulated and vigorously-debated *Monthly CO<sub>2</sub> Report*, including graphs showing changes in CO<sub>2</sub> concentration and in global mean surface temperature since 1980, when the satellites went on weather watch and the NOAA first published its global CO<sub>2</sub> concentration series. Since some commenters here at Wattsup have queried some of our findings, I have asked Anthony to allow me to contribute this short discussion.

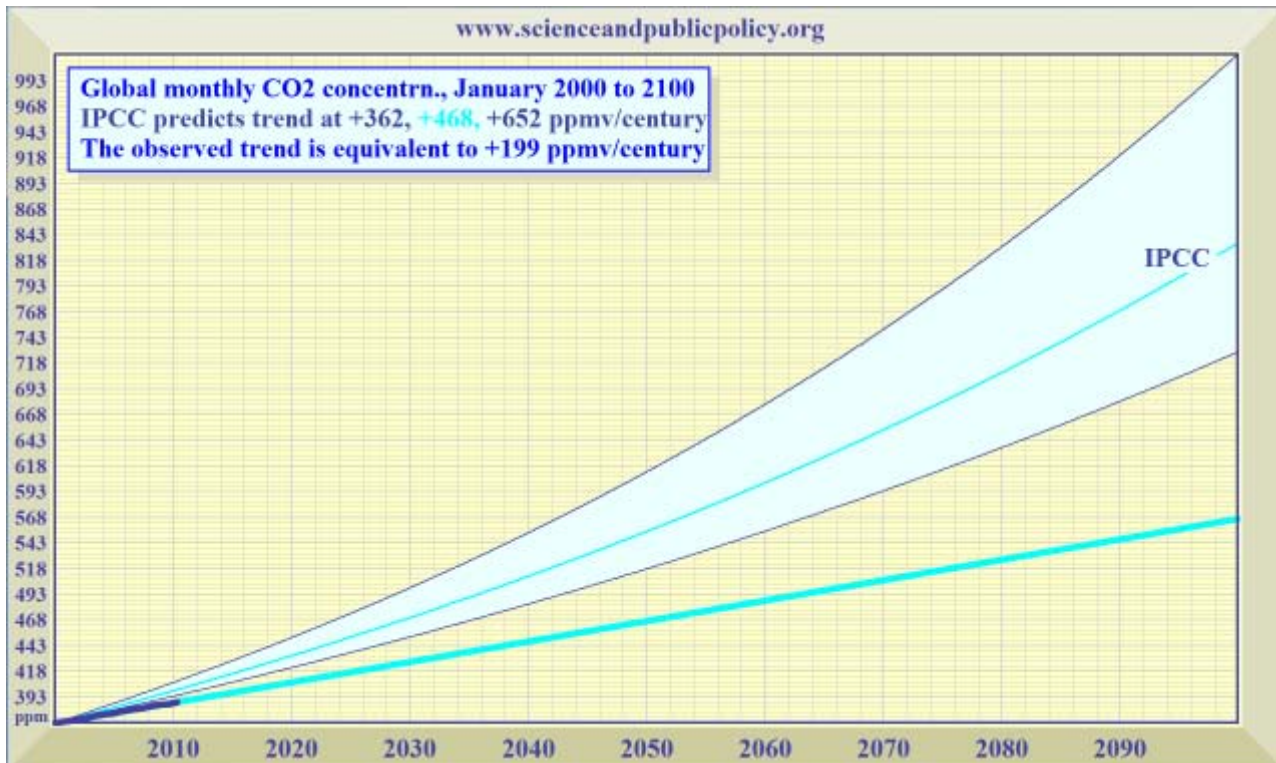
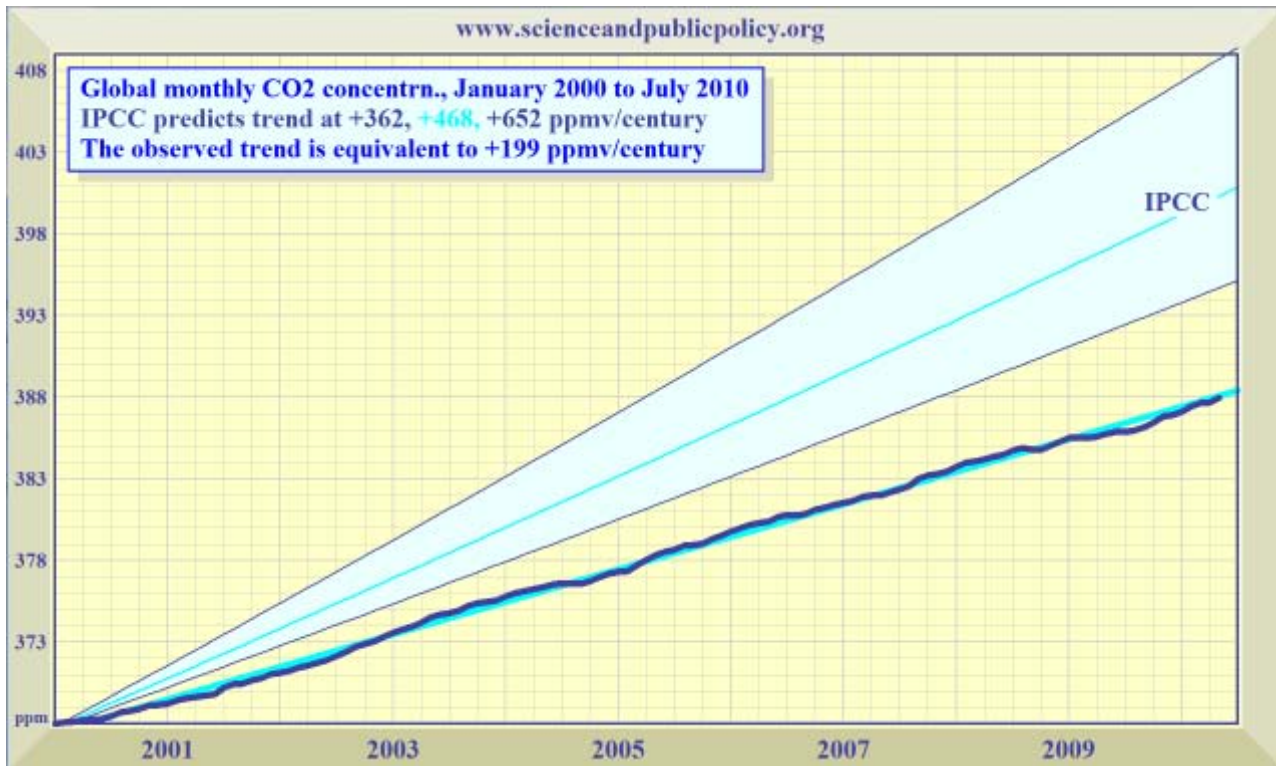
We were among the first to show that **CO<sub>2</sub> concentration** is not rising at the fast, exponential rate that current anthropogenic emissions would lead the IPCC to expect, and that **global temperature** has scarcely changed since the turn of the millennium on 1 January 2001.

**CO<sub>2</sub> concentration:** On emissions reduction, the international community has talked the talk, but – not least because China, India, Indonesia, Russia, Brazil, and South Africa are growing so quickly – it has not walked the walk. Accordingly, carbon emissions are at the high end of the IPCC's projections, close to the A2 (“business as usual”) emissions scenario, which projects that atmospheric CO<sub>2</sub> will grow at an exponential rate between now and 2100 in the absence of global cuts in emissions:



**Exponential increase** in CO<sub>2</sub> concentration from 2000-2100 is projected by the IPCC on its A2 emissions scenario, which comes closest to today's CO<sub>2</sub> emissions. On the SPPI CO<sub>2</sub>-concentration graph, this projection is implemented by way of an exponential function that generates the projection zone. This IPCC graph has been enlarged, its ordinate and abscissa labeled, and its aspect ratio altered to provide a comparison with the landscape format of the SPPI graph.

On the A2 emissions scenario, the IPCC foresees CO<sub>2</sub> rising from a measured 368 ppmv in 2000 (NOAA global CO<sub>2</sub> dataset) to a projected 836[730, 1020] ppmv by 2100. However, reality is not obliging. The rate of increase in CO<sub>2</sub> concentration has been slowing in recent years: an exponential curve cannot behave thus. In fact, the NOAA's deseasonalized CO<sub>2</sub> concentration curve is very close to linear:



**CO<sub>2</sub> concentration change** from 2000-2010 (upper panel) and projected to 2100 (lower panel). The least-squares linear-regression trend on the data shows CO<sub>2</sub> concentration rising to just 570 ppmv by 2100, well below the IPCC's least estimate of 730 ppmv on the A2 emissions scenario.

The IPCC projection zone on the SPPI graphs has its origin at the left-hand end of the linear-regression trend on the NOAA data, and the exponential curves are calculated from that point so that they reach the IPCC's projected concentrations in 2100.

We present the graph thus to show the crucial point: that the CO<sub>2</sub> concentration trend is well below the least IPCC estimate. Some have criticized our approach on the ground that over a short enough distance a linear and an exponential trend may be near-coincident. This objection is more theoretical than real.

First, the fit of the dark-blue deseasonalized NOAA data to the underlying linear-regression trend line (light blue) is very much closer than it is even to the IPCC's least projection on scenario A2. If CO<sub>2</sub> were now in fact rising at a merely linear rate, and if that rate were to continue, concentration would reach only 570 ppmv by 2100.

Secondly, the exponential curve most closely fitting the NOAA data would be barely supra-linear, reaching just 614 ppmv by 2100, rather than the linear 570 ppmv. In practice, the substantial shortfall between prediction and outturn is important, as we now demonstrate. The equation for the IPCC's central estimate of equilibrium warming from a given rise in CO<sub>2</sub> concentration is:

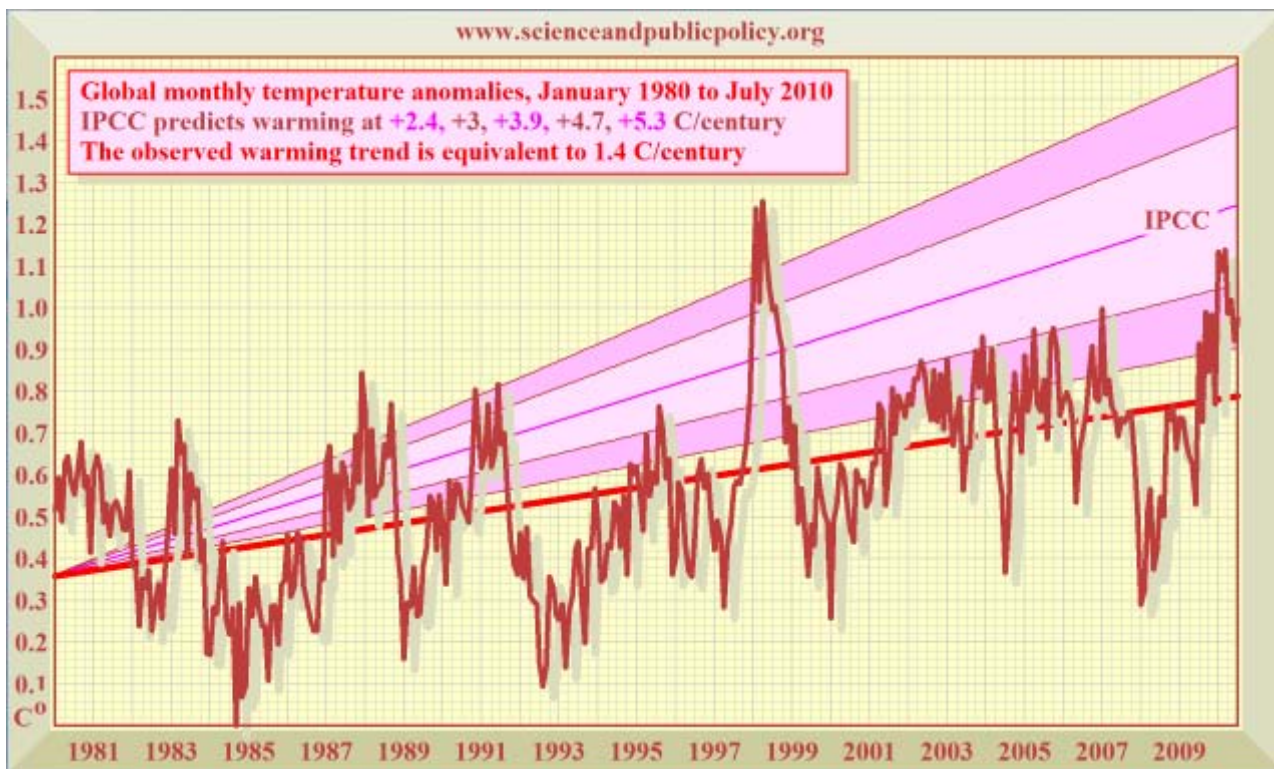
$$\Delta T = 4.7 \ln(C/C_0),$$

where the bracketed term represents a proportionate increase in CO<sub>2</sub> concentration. Thus, at CO<sub>2</sub> doubling, the IPCC would expect  $4.7 \ln 2 = 3.26$  K warming – or around 5.9 F° (IPCC, 2007, ch.10, p.798, box 10.2). On the A2 scenario, CO<sub>2</sub> is projected to increase by more than double: equilibrium warming would be 3.86 K, and transient warming would be <0.5 K less, at 3.4 K.

But if we were to take the best-fit exponential trend on the CO<sub>2</sub> data over the past decade, equilibrium warming from 2000-2100 would be  $4.7 \ln(614/368) = 2.41$  K, comfortably below the IPCC's least estimate and a hefty 26% below its central estimate. Combining the IPCC's apparent overestimate of CO<sub>2</sub> concentration growth with the fact that use of the IPCC's methods for determining climate sensitivity to observed increases in the concentration of CO<sub>2</sub> and five other climate-relevant greenhouse gases over the 55 years 1950-2005 would project a transient warming 2.3 times greater than the observed 0.65 K, anthropogenic warming over the 21<sup>st</sup> century could be as little as 1 K (less than 2 F°), which would be harmless and beneficial.

**Temperature:** How, then, has observed, real-world global temperature responded?





**The UAH satellite temperature record** shows warming at a rate equivalent to 1.4 K/century over the past 30 years. However, the least-squared linear-regression trend is well below the lower bound of the IPCC projection zone.

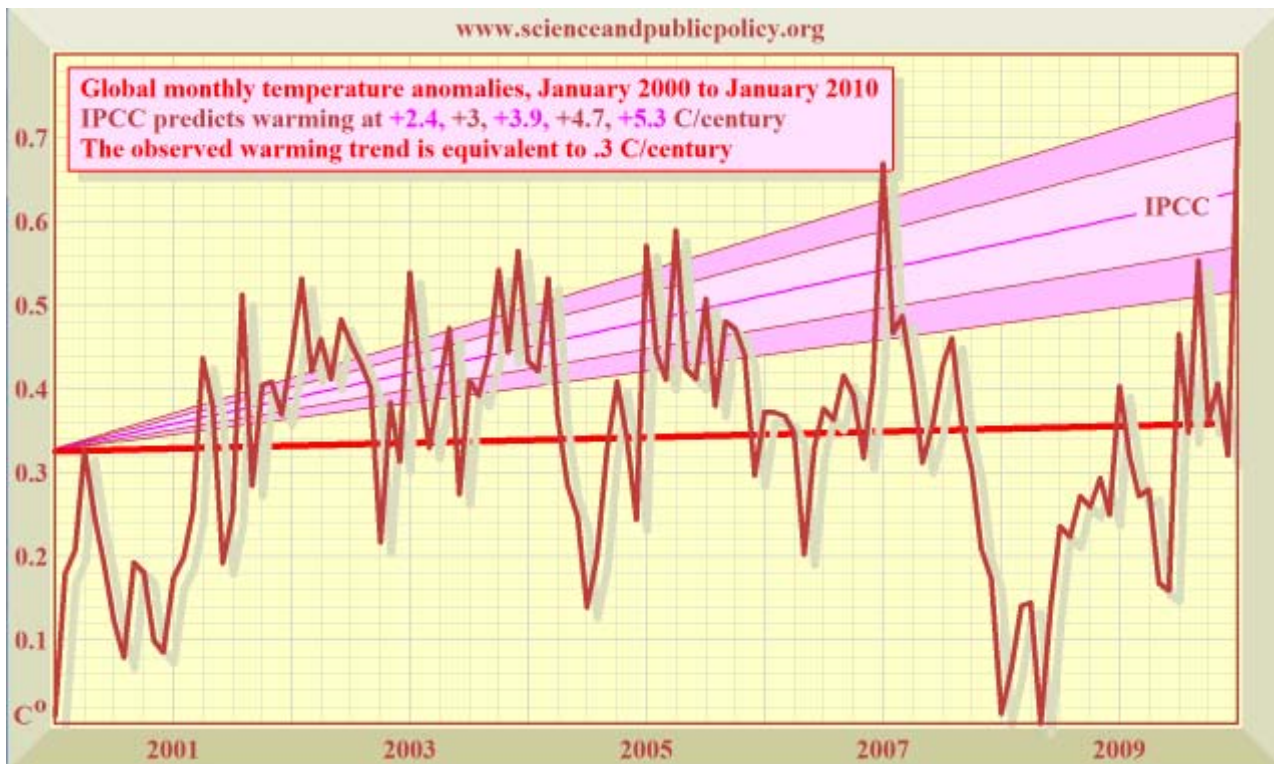
The SPPI's graph of the University of Alabama at Huntsville's monthly global-temperature anomalies over the 30 years since 1 January 1980 shows warming at a rate equivalent to 1.4 K/century – almost double the rate for the 20<sup>th</sup>-century as a whole. However, most of the warming was attributable to a naturally-occurring reduction in cloud cover that allowed some 2.6 Watts per square meter of additional solar radiance to reach the Earth's surface between 1981 and 2003 (Pinker *et al.*, 2005; Wild *et al.*, 2006; Boston, 2010, personal communication).

Even with this natural warming, the least-squares linear-regression trend on the UAH monthly global mean surface temperature anomalies is below the lower bound of the IPCC projection zone.

Some have said that the IPCC projection zone on our graphs should show exactly the values that the IPCC actually projects for the A2 scenario. However, as will soon become apparent, the IPCC's "global-warming" projections for the early part of the present century appear to have been, in effect, artificially detuned to conform more closely to observation. In compiling our graphs, we decided not merely to accept the IPCC's projections as being a true

representation of the warming that using the IPCC's own methods for determining climate sensitivity would lead us to expect, but to establish just how much warming the use of the IPCC's methods would predict, and to take that warming as the basis for the definition of the IPCC projection zone.

Let us illustrate the problem with a concrete example. On the A2 scenario, the IPCC projects a warming of 0.2 K/decade for 2000-2020. However, given the IPCC's projection that CO<sub>2</sub> concentration will grow exponentially from 368 ppmv in 2000 towards 836 ppmv by 2100, CO<sub>2</sub> should have been  $368e^{(10/100) \ln(836/368)} = 399.5$  ppmv in 2010, and equilibrium warming should thus have been  $4.7 \ln(399.5/368) = 0.39$  K, which we reduce by one-fifth to yield transient warming of 0.31 K, more than half as much again as the IPCC's 0.2 K. Of course, CO<sub>2</sub> concentration in 2010 was only 388 ppmv, and, as the SPPI's temperature graph shows (this time using the RSS satellite dataset), warming occurred at only 0.3 K/century: about a tenth of the transient warming that use of the IPCC's methods would lead us to expect.



**Barely significant warming:** The RSS satellite data for the first decade of the 21<sup>st</sup> century show only a tenth of the warming that use of the IPCC's methods would lead us to expect.

We make no apology, therefore, for labelling as “IPCC” a projection zone that is calculated on the basis of the methods described by the IPCC itself. Our intention in publishing these

graphs is to provide a visual illustration of the extent to which the methods relied upon by the IPCC itself in determining climate sensitivity are reliable.

Some have also criticized us for displaying temperature records for as short a period as a decade. However, every month we also display the full 30-year satellite record, so as to place the current millennium's temperature record in its proper context. And our detractors were somehow strangely silent when, not long ago, a US agency issued a statement that the past 13 months had been the warmest in the instrumental record, and drew inappropriate conclusions from it about catastrophic "global warming".

We have made one adjustment to please our critics: the IPCC projection zone in the SPPI temperature graphs now shows transient rather than equilibrium warming.

One should not ignore the elephant in the room. Our CO<sub>2</sub> graph shows one elephant: the failure of CO<sub>2</sub> concentration over the past decade to follow the high trajectory projected by the IPCC on the basis of global emissions similar to today's. As far as we can discover, no one but SPPI has pointed out this phenomenon. Our temperature graph shows another elephant: the 30-year warming trend – long enough to matter – is again well below what the IPCC's methods would project. If either situation changes, followers of our monthly graphs will be among the first to know. As they say at Fox News, "We report: you decide."

**Source:** <http://wattsupwiththat.com/2010/08/14/monckton-why-current-trends-are-not-alarming/>.



Shark cover photo by Carl Roessler as posted on [itsnature.org](https://www.itsnature.org).



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