

# “2010 WAS THE WARMEST YEAR ON RECORD”

*by Christopher Monckton of Brenchley*



SPPI ORIGINAL PAPER



January 10, 2011

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Michael Steketee, writing in *The Australian* in January 2011, echoed the BBC (whose journalists' pension fund is heavily weighted towards “green” “investments”) and other climate-extremist vested interests in claiming that 2010 was the warmest year on record worldwide. Mr. Steketee's short article makes two dozen questionable assertions, which either require heavy qualification or are downright false. His assertions will be printed in **bold face**: the truth will appear in Roman face.

## 1. **BASED ON PRELIMINARY DATA TO NOVEMBER 30, SEA SURFACE TEMPERATURES AROUND AUSTRALIA WERE THE WARMEST ON RECORD LAST YEAR, AS WERE THOSE FOR THE PAST DECADE.**

The record only began ten decades ago. As for sea temperatures, they are less significant for analyzing “global warming” than estimated total ocean heat content. A recent paper by Professors David Douglass and Robert Knox of Rochester University, New York, has established that – contrary to various climate-extremist assertions – there has been no net accumulation of “missing energy” in the form of heat in the oceans worldwide in the six years since ocean heat content was first reliably measured by the 3000 automated ARGO bathythermographs in 2003. This finding implies that the amount of warming we can expect from even quite a large increase in CO<sub>2</sub> concentration is far less than the IPCC and other climate-extremist groups maintain.

## 2. **THE WORLD METEOROLOGICAL ORGANISATION SAYS THE YEAR TO THE END OF OCTOBER WAS THE WARMEST SINCE INSTRUMENTAL CLIMATE RECORDS STARTED IN 1850 – 0.55 C° ABOVE THE 1961-90 AVERAGE OF 14 C°.**

It is easy to cherry-pick periods of less than a calendar year and say they establish a new record. The cherry-picking of the first nine months of 2010 is particularly unacceptable, since that period was dominated by a substantial El Niño Southern Oscillation, a sudden alteration in the pattern of ocean currents worldwide that leads to warmer weather for several months all round the world. The last few months of the year, carefully excluded from Mr. Steketee's statement, showed the beginnings of a La Niña event, which tends largely to reverse the effect of its preceding El Niño and make the world cooler. Indeed, the calendar year from January to December 2010, according to the reliable RSS and UAH satellite records, was not the warmest on record. Besides, what is important is *how fast* the world is warming. In fact, the *rate* of warming from 1975-2001, at 0.16 C° per decade, was the fastest rate to be sustained for more than a decade in the 160-year record, but exactly the same rate occurred from 1860-1880 and again from 1910-1940, when we could not possibly have had anything to do with it. Since late 2001 there has been virtually no “global warming” at all.

### 3. THE LAST DECADE ALSO WAS THE WARMEST ON RECORD.

After 300 years of global warming, during nearly all of which we could not on any view have influenced the climate to a measurable degree, it is scarcely surprising that recent decades will be warmer than earlier decades. That is what one would expect. If one has been climbing up a steep hill for a long time, one should not be surprised to find oneself higher up at the end of the climb than at the beginning.

### 4. THE WORLD IS NOT COOLER COMPARED TO 1998.

Actually, it is cooler. There was a remarkable spike in global temperatures in 1998, caused not by manmade “global warming” but by a Great El Niño event – an alteration in the pattern of ocean currents that begins in the equatorial eastern Pacific and spreads around the globe, lasting a few months. In the first nine months of 2010 there was another substantial El Niño, but even at its peak it did not match the Great El Niño of 1998.

### 5. THE TRENDS HAPPEN TO FOLLOW CLOSELY THE PREDICTIONS OVER THE PAST 40 YEARS OF TEMPERATURE RISES RESULTING FROM INCREASED GREENHOUSE GAS EMISSIONS.

In the 40 years since 1970, global temperatures have risen at a linear rate equivalent to around 1.3 C°/century. CO<sub>2</sub> concentration is rising in a straight line at just 2 ppmv/year at present and, even if it were to accelerate to an exponential rate of increase, the corresponding temperature increase would be expected to rise merely in a straight line. On any view, 1.3 C° of further “global warming” this century would be harmless. The IPCC is predicting 3.4 C°, but since the turn of the millennium on 1 January 2001 global temperature has risen (taking the average of the two satellite datasets) at a rate equivalent to just 0.6 C°/century, rather less than the warming rate of the entire 20<sup>th</sup> century. In these numbers, there is nothing whatever to worry about – except the tendency of some journalists to conceal them.

### 6. MOST SCIENTISTS AGREE THAT DOUBLING THE CARBON DIOXIDE IN THE ATMOSPHERE IS LIKELY TO LEAD TO WARMING OF 2-3 C°.

It is doubtful whether Mr. Steketee had consulted “most scientists”. Most scientists, not being climate scientists, rightly take no view on the climate debate. Most climate scientists have not studied the question of how much warming a given increase in CO<sub>2</sub> concentration will cause: therefore, whatever opinion they may have is not much more valuable than that of a layman. Most of the few dozen scientists worldwide whom Prof. Richard Lindzen of MIT estimates have actually studied climate sensitivity to the point of publication in a learned journal have reached their results not by measurement and observation but by mere modeling. The models predict warming in the range mentioned by Mr. Steketee, but at numerous crucial points the models are known to reflect the climate inaccurately. In particular, the models predict that if *and only if* Man is the cause of warming, the tropical upper air, six miles above the ground, should warm up to thrice as fast as the surface, but this tropical upper-troposphere “hot-spot” has not been observed in 50 years of measurement by balloon-mounted radiosondes, sondes dropped from high-flying aircraft,

or satellites. Also, the models predict that every Celsius degree of warming should increase evaporation from the Earth's surface by 1-3%, but the observed increase is more like 6%. From this it is simple to calculate that the IPCC has overestimated fourfold the amount of warming we can expect from adding greenhouse gases to the atmosphere. Take away that prodigious exaggeration, demonstrated repeatedly in scientific papers but never reported by the likes of Mr. Steketee, and the climate "crisis" vanishes.

**7. WARMING OF 2-3 C° RISKS SIGNIFICANT ENVIRONMENTAL AND ECONOMIC DAMAGE.**

Actually, the IPCC's current thinking is that up to 2° of warming compared with the present would be harmless and even beneficial. Since far greater temperatures than this have been the rule on Earth for most of the past 600 million years, there is no sound scientific basis for the assumption that "significant environmental and economic damage" would result from so small an additional warming. However, significant economic damage is already resulting from the costly but pointlessly Canute-like attempts governments to try to make "global warming" go away.

**8. GREENHOUSE GAS CONCENTRATIONS ROSE BY 27.5% FROM 1990-2009.**

Since anthropogenic effects on the climate are net-zero except for CO<sub>2</sub>, we need only consider CO<sub>2</sub> concentration, which was 353 parts per million by volume in 1990 and is 390 ppmv now, an increase not of 27.5% but of just 10.5%.

**9. ARCTIC SEA ICE SHRANK TO ITS THIRD-LOWEST AREA IN THE SATELLITE RECORDS, OFFSET ONLY SLIGHTLY BY GROWTH IN ANTARCTIC SEA ICE.**

In fact, the global sea-ice record shows virtually no change throughout the past 30 years, because the quite rapid loss of Arctic sea ice since the satellites were watching has been matched by a near-equally rapid gain of Antarctic sea ice. Indeed, when the summer extent of Arctic sea ice reached its lowest point in the 30-year record in mid-September 2007, just three weeks later the Antarctic sea extent reached a 30-year record high. The record low was widely reported; the corresponding record high was almost entirely unreported.

**10. GLOBAL SNOW COVER IS FALLING, INFERENTIALLY BECAUSE OF MAN'S INFLUENCE.**

In fact, a new record high for snow cover was set in the winter of 2008/2009, and there is some chance that a further record high will be set this year.

**11. GLOBAL SEA LEVELS ARE RISING, INFERENTIALLY BECAUSE OF MAN'S INFLUENCE.**

In fact, the rate of increase in sea level has not changed since satellites first began measuring it reliably in 1993. It is a dizzying 1 ft/century – not vastly greater than the 8 inches/century that had previously been inferred from tide-gauges. A recent paper has confirmed what marine biologists had long suspected: coral atolls simply grow to meet the light as the sea rises, and some of them have even gained land mass recently according to a

just-published scientific paper. Professor Niklas Mörner, who has been studying sea level for a third of a century, says it is physically impossible for sea level to rise at much above its present rate, and he expects 4-8 inches of sea level rise this century, if anything rather below the rate of increase in the last century. In the 11,400 years since the end of the last Ice Age, sea level has risen at an average of 4 feet/century, though it is now rising much more slowly because very nearly all of the land-based ice that is at low enough latitudes and altitudes to melt has long since gone.

**12. MUNICH RE SAYS 2010 SAW THE SECOND-HIGHEST NUMBER OF NATURAL CATASTROPHES SINCE 1980, 90% OF THEM WEATHER-RELATED.**

There are really only three categories of insurable natural catastrophe – meteorological, epidemiological, and seismic (volcanism, earthquakes, tsunamis, etc.). Except during years when major seismic disasters occur (such as the tsunami caused by an earthquake in 2000), or when major pandemics kill large numbers at an unexpected rate (and that did not happen in 2010), weather-related natural disasters always account for getting on for 90% of all such disasters. Because the climate is a mathematically-chaotic object, the incidence of weather-related disasters is highly variable from year to year, and there is no good reason to attribute the major events of 2010 to manmade “global warming”.

**13. THE TEMPERATURE OF 46.4 C° IN MELBOURNE ONE SATURDAY IN 2010 WAS MORE THAN 3 C° ABOVE THE PREVIOUS HIGHEST FOR FEBRUARY.**

February is the height of summer in Melbourne. Since the planet has been warming for 300 years, it is not surprising to find high-temperature records being broken from time to time. However, some very spectacular cold-weather records were also broken both in early 2010, when all 49 contiguous United States were covered in snow for the first time since satellite monitoring began 30 years ago, and in December, which was the coldest final month of the year in central England since records began 352 years ago. However, neither the hot-weather nor the cold-weather extremes of 2010 have much to do with manmade “global warming”; like the heatwave of 2003 in Europe that is said to have killed 35,000 people, they are known to have been caused by an unusual pattern of what meteorologists call “blocking highs” – comparatively rare areas of stable high pressure that dislodge the jet-streams from their usual path and lock weather systems in place for days or sometimes even months at a time. No link has been established between the frequency, intensity, or duration of blocking highs and manmade “global warming”.

**14. IN MOSCOW, JULY 2010 WAS MORE THAN 2 C° ABOVE THE PREVIOUS TEMPERATURE RECORD, AND TEMPERATURE ON 29 JULY WAS 38.2 C°.**

And the lowest-ever temperatures have been measured in several British and US locations in the past 12 months. Cherry-picking individual extreme-weather events that point in one direction only, when there are thousands of such events that also point in another direction, is neither sound science nor sound journalism.

**15. THE HEATWAVE AND FOREST FIRES IN CENTRAL RUSSIA KILLED AT LEAST 56,000, MAKING IT THE WORST NATURAL DISASTER IN RUSSIA'S HISTORY.**

More cherry-picking, and the notion that the forest fires were the worst natural disaster in Russia's history is questionable. Intense cold – such as when General January and General February defeated Corporal Hitler at the gates of Stalingrad in 1941 – has many times killed hundreds of thousands in Russia.

**16. IN PAKISTAN, 1769 WERE KILLED IN THE COUNTRY'S WORST-EVER FLOODS.**

In fact, the floods were not the worst ever: merely the worst since 1980. The region has long been prone to flooding, and has flooded catastrophically at infrequent intervals when a blocking high combined with unusually strong runoff of snow from the Himalayas swells the numerous rivers of the region (Punjab, or *panj-aur*, means "five rivers"). The flooding was not caused by manmade "global warming" but by a blocking high.

**17. THE HURRICANE SEASON IN THE NORTH ATLANTIC WAS ONE OF THE MOST SEVERE IN THE LAST CENTURY.**

In fact, Dr. Ryan Maue of Florida State University, who maintains the Accumulated Cyclone Energy Index, a 24-month running sum of the frequency, intensity and duration of all tropical cyclones, typhoons and hurricanes round the world, says that the index is at its least value in the past 30 years, and close to its least value in 50 years. For 150 years the number of landfalling Atlantic hurricanes has shown no trend at all: this is a long and reliable record, because one does not require complex instrumentation to know that one has been struck by a hurricane.

**18. EVEN CAUTIOUS SCIENTISTS TEND TO SAY WE CAN BLAME MANMADE CLIMATE CHANGE.**

Cautious scientists say no such thing. Even the excitable and exaggeration-prone IPCC has repeatedly stated that individual extreme-weather events cannot be attributed to manmade "global warming", and it would be particularly incautious of any scientist to blame the blocking highs that caused nearly all of the weather-related damage in 2010 on us when these are long-established, naturally-occurring phenomena.

**19. CLIMATE CHANGE HAS CONTRIBUTED TO THE 20% DECLINE IN RAINFALL IN PARTS OF SOUTHERN AUSTRALIA OVER THE PAST 40 YEARS.**

Climate change began 4,567 million years ago, on that Thursday when the Earth first formed (as Prof. Plimer puts it). The question is whether *manmade* climate change has contributed to the drought. Interestingly, there has been very heavy rainfall in previously drought-ridden parts of southern Australia in each of the last two years. Australia has a desert climate: it is no surprise, therefore, that periods of drought – sometimes prolonged – will occur. One of the longest records of drought and flood we have is the Nilometer, dating back 5000 years. Periods of drought far more savage than anything seen in modern times were frequent occurrences, and entire regions of Egypt became uninhabitable as a result. A



20% decline in rainfall in a single region, therefore, cannot be safely attributed to anything other than the natural variability of the climate.

**20. THERE IS STRONG EVIDENCE THAT “GLOBAL WARMING” MADE THE BUSH-FIRES AROUND MELBOURNE WORSE.**

There is no such evidence. As the IPCC has repeatedly said, ascribing individual, local extreme-weather events to “global warming” is impermissible.

**21. THERE HAS BEEN A SUCCESSION OF EXTRAORDINARY HEATWAVES, WITH BIG JUMPS IN RECORD TEMPERATURES, STARTING IN EUROPE IN 2003 AND CONTINUING ALL AROUND THE WORLD, CULMINATING IN RUSSIA LAST YEAR. MORE THAN 17 COUNTRIES BROKE THEIR MAXIMUM TEMPERATURE RECORDS IN 2010, AND “YOU REALLY HAVE TO STRAIN CREDIBILITY TO SAY IT HAS NOTHING TO DO WITH CLIMATE CHANGE.”**

The heatwave in Europe in 2003 is known to have been caused by a blocking high similar to those which gave Russia its record high temperatures in 2010 and kept the monsoon fixed over Pakistan for long enough to cause catastrophic flooding. You really have to stretch credibility to say it has anything to do with manmade “global warming”. Though that heatwave may have killed 35,000 right across Europe, a three-day cold snap in Britain the previous year had killed 21,000 just in one country. The net effect of warmer worldwide weather, therefore, is to reduce deaths, not to increase them. That is why periods such as the Holocene Climate Optimum, when temperatures were 3 C° warmer than the present for most of the time between 6000 and 8000 years ago, are called “optima”: warmer weather is better for most Earth species – including Man – than colder weather.

**22. FOR 20 YEARS MORE HOT-WEATHER THAN COLD-WEATHER TEMPERATURE RECORDS HAVE BEEN SET.**

This is merely another way of saying that temperatures today are generally higher than they were 20 years ago. Since there has been some warming, more hot-weather than cold-weather records have been set. Not exactly surprising, and not exactly alarming either: for the mere *fact* of warming tells us nothing about the *cause* of the warming, particularly when the rate of warming in recent decades has been no greater than what has been seen in two previous quarter-century periods over the past 160 years.

**23. EVEN IF GREENHOUSE-GAS EMISSIONS WERE TO STABILIZE AT LITTLE MORE THAN TODAY’S LEVELS, 2 C° OF FURTHER WARMING WILL OCCUR – FOUR TIMES THE INCREASE OVER THE PAST 30 YEARS.**

This value of 2 C° - like too many others in this regrettably fictitious article – appears to have been plucked out of thin air. Let us do the math. We can ignore all Man’s influences on the climate except CO<sub>2</sub> because, up to now, they have been self-canceling, as the table of “radiative forcings” in the IPCC’s most recent quinquennial *Assessment Report* shows. In 1750, before the Industrial Revolution, the concentration of CO<sub>2</sub> was 278 ppmv. Now it is 390 ppmv. Taking the multi-model mean central estimate from Box 10.2 on p.798 of the 2007 *Fourth Assessment Report*, plus or minus one standard deviation, we can derive the following simple equation for the total amount of warming to be expected in 1000 years’

time, when the climate has fully settled to equilibrium after the perturbation that our carbon emissions to date are thought to have caused:

$$\Delta T_{\text{equ}} = (4.7 \pm 1) \ln(390/278) \text{ F}^\circ$$

Let us generously go one standard deviation above the central estimate: thus, a high-end estimate of the total equilibrium warming the IPCC would expect as a result of our CO<sub>2</sub> emissions since 1750 is 5.7 times the natural logarithm of the proportionate increase in CO<sub>2</sub> concentration in the 260-year period: i.e. 1.9 C°. Even this total since 1750 to the present is below the 2 C° Mr. Setekee says is lurking in the pipeline.

Now, to pretend that manmade “global warming” is a problem as big as the IPCC says it is, and that there will be more warming in the pipeline even if we freeze our emissions at today’s levels, we have to pretend that all of the observed warming since 1750 – i.e. about 1.2 C° – was our fault. So we deduct that 1.2 C° from the 1.9 C° equilibrium warming. Just 0.7 C° of warmer weather is still to come, *at equilibrium*.

However, various climate extremists have published papers saying that equilibrium warming will not occur for 1000 years (or even, in a particularly fatuous recent paper, 3000 years). The IPCC itself only expects about 57% of equilibrium warming to occur by 2100: the rest will take so long to arrive that even our children’s children will not be around to notice, and the residual warming will happen so gradually that everyone and everything will have plenty of time to adjust.

Bottom line, then: by 2100 we can expect not 2 C° of further “global warming” as a result of our emissions so far, but 0.4 C° at most. The truth, as ever in the climate debate, is a great deal less thrilling than the lie.

#### 24. ADAPTATION TO THE CONSEQUENCES OF “GLOBAL WARMING” WILL GET MORE DIFFICULT THE LONGER WE DELAY.

This assertion, too, has no scientific basis whatsoever. The costs of adaptation are chiefly an economic rather than a climatological question. Every serious economic analysis (I exclude the discredited propaganda exercise of Stern, with its absurd near-zero discount rate and its rate of “global warming” well in excess of the IPCC’s most extreme projections) has demonstrated that the costs of waiting and adapting to any adverse consequences that may arise from “global warming”, even if *per impossibile* that warming were to occur at the rapid rate imagined by the IPCC but not yet seen in the instrumental temperature record, would be orders of magnitude cheaper and more cost-effective than any Canute-like attempt to prevent any further “global warming” by taxing and regulating CO<sub>2</sub> emissions. It follows that adaptation to the consequences of “global warming” will get easier and cheaper the longer we wait: for then we will only have to adapt to the probably few and minor consequences that will eventually occur, and not until they occur, and only where and to the extent that they occur.





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**Robert Ferguson**

*SPPI President*

[bferguson@sppinstitute.org](mailto:bferguson@sppinstitute.org)

202-288-5699

P.O. Box 209

5501 Merchants View Square

Haymarket, VA 20169

[www.scienceandpublicpolicy.org](http://www.scienceandpublicpolicy.org)

