

Global Warming: Ten Facts and Ten Myths on Climate Change

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Originally published by GR in 2009 incisive article by the late Professor Robert M. Carter, Research Professor at James Cook University (Queensland) and the University of Adelaide (South Australia)

NOTE: *The data presented by the author pertains to the period prior to 2009*

Ten Facts about Climate Change

1. Climate has always changed, and it always will. The assumption that prior to the industrial revolution the Earth had a “stable” climate is simply wrong. The only sensible thing to do about climate change is to prepare for it.
2. Accurate temperature measurements made from weather balloons and satellites since the late 1950s show no atmospheric warming since 1958. In contrast, averaged ground-based thermometers record a warming of about 0.4°C over the same time period. Many scientists believe that the thermometer record is biased by the Urban Heat Island effect and other artefacts.
3. Despite the expenditure of more than US\$50 billion dollars looking for it since 1990, no unambiguous anthropogenic (human) signal has been identified in the global temperature pattern.
4. Without the greenhouse effect, the average surface temperature on Earth would be -18°C rather than the equable $+15^{\circ}\text{C}$ that has nurtured the development of life.

Carbon dioxide is a minor greenhouse gas, responsible for $\sim 26\%$ (8°C) of the total greenhouse effect (33°C), of which in turn at most 25% ($\sim 2^{\circ}\text{C}$) can be attributed to carbon

dioxide contributed by human activity. Water vapour, contributing at least 70% of the effect, is by far the most important atmospheric greenhouse gas.

5. On both annual (1 year) and geological (up to 100,000 year) time scales, changes in atmospheric temperature PRECEDE changes in CO₂. Carbon dioxide therefore cannot be the primary forcing agent for temperature increase (though increasing CO₂ does cause a diminishingly mild positive temperature feedback).

6. The UN Intergovernmental Panel on Climate Change (IPCC) has acted as the main scaremonger for the global warming lobby that led to the Kyoto Protocol. Fatally, the IPCC is a political, not scientific, body.

Hendrik Tennekes, a retired Director of Research at the Royal Netherlands Meteorological Institute, says that *"the IPCC review process is fatally flawed"* and that *"the IPCC wilfully ignores the paradigm shift created by the foremost meteorologist of the twentieth century, Edward Lorenz"*.

7. The Kyoto Protocol will cost many trillions of dollars and exercises a significant impost on those countries that signed it, but will deliver no significant cooling (less than .02 °C by 2050, assuming that all commitments are met).

The Russian Academy of Sciences says that Kyoto has no scientific basis; Andre Illarianov, senior advisor to Russian president Putin, calls Kyoto-ism *"one of the most aggressive, intrusive, destructive ideologies since the collapse of communism and fascism"*. If Kyoto was a "first step" then it was in the same wrong direction as the later "Bali roadmap".

8. Climate change is a non-linear (chaotic) process, some parts of which are only dimly or not at all understood. No deterministic computer model will ever be able to make an accurate prediction of climate 100 years into the future.

9. Not surprisingly, therefore, experts in computer modelling agree also that no current (or likely near-future) climate model is able to make accurate predictions of regional climate change.

10. The biggest untruth about human global warming is the assertion that nearly all scientists agree that it is occurring, and at a dangerous rate.

The reality is that almost every aspect of climate science is the subject of vigorous debate. Further, thousands of qualified scientists worldwide have signed declarations which (i) query the evidence for hypothetical human-caused warming and (ii) support a rational scientific (not emotional) approach to its study within the context of known natural climate change.

LAYING TEN GLOBAL WARMING MYTHS

Myth 1 Average global temperature (AGT) has increased over the last few years. [prior to 2009]

Fact 1 Within error bounds, AGT has not increased since 1995 and has declined since 2002, despite an increase in atmospheric CO₂ of 8% since 1995.

Myth 2 During the late 20th Century, AGT increased at a dangerously fast rate and

reached an unprecedented magnitude.

Facts 2 The late 20th Century AGT rise was at a rate of 1-2⁰ C/century, which lies well within natural rates of climate change for the last 10,000 yr. AGT has been several degrees warmer than today many times in the recent geological past.

Myth 3 AGT was relatively unchanging in pre-industrial times, has sky-rocketed since 1900, and will increase by several degrees more over the next 100 years (the Mann, Bradley & Hughes “hockey stick” curve and its computer extrapolation).

Facts 3 The Mann et al. curve has been exposed as a statistical contrivance. There is no convincing evidence that past climate was unchanging, nor that 20th century changes in AGT were unusual, nor that dangerous human warming is underway.

Myth 4 Computer models predict that AGT will increase by up to 6⁰ C over the next 100 years.

Facts 4 Deterministic computer models do. Other equally valid (empirical) computer models predict cooling.

Myth 5 Warming of more than 2⁰ C will have catastrophic effects on ecosystems and mankind alike.

Facts 5 A 2⁰ C change would be well within previous natural bounds. Ecosystems have been adapting to such changes since time immemorial. The result is the process that we call evolution. Mankind can and does adapt to all climate extremes.

Myth 6 Further human addition of CO₂ to the atmosphere will cause dangerous warming, and is generally harmful.

Facts 6 No human-caused warming can yet be detected that is distinct from natural system variation and noise. Any additional human-caused warming which occurs will probably amount to less than 1⁰ C. Atmospheric CO₂ is a beneficial fertilizer for plants, including especially cereal crops, and also aids efficient evapo-transpiration.

Myth 7 Changes in solar activity cannot explain recent changes in AGT.

Facts 7 The sun’s output varies in several ways on many time scales (including the 11-, 22- and 80-year solar cycles), with concomitant effects on Earth’s climate. While changes in visible radiation are small, changes in particle flux and magnetic field are known to exercise a strong climatic effect. More than 50% of the 0.8⁰ C rise in AGT observed during the 20th century can be attributed to solar change.

Myth 8 Unprecedented melting of ice is taking place in both the north and south polar regions.

Facts 8 Both the Greenland and Antarctic ice sheets are growing in thickness and cooling at their summit. Sea ice around Antarctica attained a record area in 2007. Temperatures in the Arctic region are just now achieving the levels of natural warmth experienced during the

early 1940s, and the region was warmer still (sea-ice free) during earlier times.

Myth 9 Human-caused global warming is causing dangerous global sea-level (SL) rise.

Facts 9 SL change differs from time to time and place to place; between 1955 and 1996, for example, SL at Tuvalu fell by 105 mm (2.5 mm/yr). Global average SL is a statistical measure of no value for environmental planning purposes. A global average SL rise of 1-2 mm/yr occurred naturally over the last 150 years, and shows no sign of human-influenced increase.

Myth 10 The late 20th Century increase in AGT caused an increase in the number of severe storms (cyclones), or in storm intensity.

Facts 10 Meteorological experts are agreed that no increase in storms has occurred beyond that associated with natural variation of the climate system.

The late Robert M. Carter was a Research Professor at James Cook University (Queensland) and the University of Adelaide (South Australia). He is a palaeontologist, stratigrapher, marine geologist and environmental scientist with more than thirty years professional experience.

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