

GLOBAL WARMING: THE SOCIAL CONSTRUCTION OF A QUASI-REALITY?

by Dennis Ambler



GLOBAL WARMING: THE SOCIAL CONSTRUCTION
OF A QUASI-REALITY?

by

Dennis Ambler

Reprinted from

ENERGY &
ENVIRONMENT

VOLUME 18 No. 6 2007

MULTI-SCIENCE PUBLISHING CO. LTD.
5 Wates Way, Brentwood, Essex CM15 9TB, United Kingdom

GLOBAL WARMING: THE SOCIAL CONSTRUCTION OF A QUASI-REALITY?

Dennis Ambler

Independent Researcher, United Kingdom (E-mail: DAmbl318@aol.com)

ABSTRACT

The pressure to prove that anthropogenic global warming is real, and happening now has become so strong, that in spite of major and irresolvable uncertainties in climate models, there is a daily renewal and re-inforcement of the idea of scientific certainty in the mainstream media. Whilst uncertainties are often acknowledged in the body of scientific reports, they are rarely seen in press releases and executive summaries.

This paper examines how an almost mass acceptance of imminent and potentially catastrophic global warming by politicians, the media and the public, has come about and highlights the role of various UK agencies such as the Tyndall Centre for Climate Change Research and the Met Office in producing this result.

1. INTRODUCTION

The Intergovernmental Panel on Climate Change (IPCC) says the twentieth century warming of 0.6°C is unparalleled in the last millennium and is 'likely' caused by increasing anthropogenic carbon dioxide levels in the atmosphere since the industrial revolution. The panel further claims that unabated emissions will drive future global temperatures up to dangerous levels, threatening the planet and humanity with extreme weather events. The main tenet of the theory is that atmospheric CO₂ acts as a 'planetary thermostat' and is a primary influence on feedback effects that alter ice caps and the oceans. This thermostat, it is claimed, can be manipulated simply by reducing anthropogenic CO₂ emissions to an internationally agreed 'safe' level, thereby controlling global temperature. The presentation of the current climate as demonstrating 'unprecedented' warmth is pivotal to establishing and sustaining popular belief in the theory. I submit that observational British and other Northern Hemisphere data are in conflict with these claims.

Why then, does government promote this perception? I suggest that a primary driver has been the knowledge of an impending energy gap in the next decade, as nuclear power stations are decommissioned and necessary decisions to rebuild have been delayed because of public concern following Three Mile Island and Chernobyl. For consistency in delivery of base power output, nuclear is seen as the only option to replace coal, even though many decades of UK coal reserves still exist, but were abandoned for political reasons in the 1980s and 90s. Ironically, coal imports in 2005 rose to a record 44 million

tonnes and some 34 percent of UK electricity generation came from coal. Major sources of imports include Russia, Australia, Colombia, South Africa and Indonesia.¹

2. PUBLIC OPINION

In order to move the agenda forward, it has been necessary to inform public opinion. In reality, 'Public Opinion' per se does not exist, but is created and re-created on a daily basis. The day's agenda is set by the morning headlines, with news bulletins repeated continually throughout 24 hours. In the case of environmental issues, those headlines are fed by press releases from official sources and from Non-Governmental Agencies, (NGO's). Thus the prevailing view is presented to the public, harvested as public opinion by various surveys or polls and then presented back to reflect the current agenda, for example, "Britons Happy to Pay for Carbon Cuts-Ofgem Survey."²

There is constant reinforcement of the paradigm by conflating any natural event with global warming. From polar bears on ice floes to penguins in the Antarctic, imagery is used powerfully and effectively for implanting the global warming message in the public consciousness. During the past year, the pressure to accept anthropogenic global warming as incontrovertible fact has been raised to fever pitch. Major focal points have been the film 'An Inconvenient Truth' by former United States vice-president Al Gore, the Stern Review of the Economics of Climate Change and the IPCC Fourth Assessment Report (AR4), Summary for Policy Makers.

There has been massive and uncritical media coverage of these events with global repetition of the same phrases such as "the debate is now over", the "tipping point has been reached" or, "ten years to save the planet". Such is the social pressure that contrary views are treated with extreme hostility and it has to be recognised that a major transformation of public perception has been achieved. Who then, have been the main actors in this process?

The major environmentalist NGO's have considerable input into government, especially through the Cabinet Office and several 'think-tanks'. For example, former Environment Minister David Miliband saw the mission of the Department for Environment and Rural Affairs (Defra) as enabling a move towards what the World Wildlife Fund, (WWF), calls "one planet living."³ The leader of the UK opposition, David Cameron, follows a similar line. He made a much-publicised visit to Norway in April 2006 "to see global warming for himself at first hand". This was very much a WWF event and was used extensively as publicity by them. The following is an extract from his Norway speech:⁴

"I'm enormously grateful to WWF for arranging this visit. It was great to meet their experts who understand so deeply the impact climate change is having, and whose important works underpins WWF's call for action."

The fact that an advocacy group is regarded as an objective scientific source shows the extent of the political influence now enjoyed by such groups. There are considerable data that show the Arctic was warmer in the 1930's than now and the point was obviously addressed in Mr Cameron's briefing because he had this to say:

“It’s true that some parts of the planet got warmer in that period, but not all. In fact a number of Arctic research stations reported a drop in average temperatures during that time. Whereas in the current period of warming, there has been a consistent rise in temperatures right across the Arctic.”

However in Norway, although the highest annual temperature was recorded in 1994, the highest monthly temperature for Oslo was 22.7°C in July 1901. The highest maximum was 35.6°C in June 1970 at Nesbyen.⁵ In Iceland, Rauferhofn was 3.6°C colder in 1979 than 1933, and in 1999 was still 0.9°C below 1933.⁶

Elsewhere, the Alaska Climate Research Centre reports that: “... since 1977 little additional warming has occurred in Alaska with the exception of Barrow and a few other locations. The stepwise shift appearing in the temperature data in 1976 corresponds to a phase shift of the Pacific Decadal Oscillation from a negative phase to a positive phase.”^{7,8,9,10}

Press releases from a multitude of research agencies play an important role in promoting the idea of inexorable warming. The main UK agencies are the Met Office, its research and climate-modelling arm, the Hadley Centre, the Tyndall Centre for Climate Change Research, the Climatic Research Unit at the University of East Anglia, (CRU) and the British Antarctic Survey, (BAS). They all issue regular press feeds, which are highly significant in moulding public perception.

3. ROBUST CLIMATE MODELS

In 1999 in Helsinki, a series of European Union ECLAT-2 climate change modelling workshops commenced and was intended to address uncertainty in climate models.¹¹ This quote is from the introduction:

“The climate system, as a complex non-linear dynamic system, is indeterminate (Shukla, 1998) and even with perfect models and unlimited computing power, for a given forcing scenario a range of future climates will always be simulated. It is for this reason that the Intergovernmental Panel on Climate Change (IPCC) has always adopted the term, projection”.

Since then, stated confidence levels in climate models have been ramped up to the point that computer simulations and projections are now firm and “robust” predictions. The government chief scientist commented in January 2006: “Over the past five years the science of climate change has become very secure.” However, only a year earlier, a Hadley Centre publication in January 2005 contradicted this view, prior to the conference on Dangerous Climate Change at the Met office headquarters in Exeter.¹² The document was called “Stabilizing Climate To Avoid Dangerous Climate Change” and was described as a “current summary of relevant research”.¹³

Significantly, in the light of claims that the debate is over, it stated that what constitutes ‘dangerous’ climate change, in the context of the UN Framework Convention on Climate Change, was still open to debate. It then proceeded to dramatically undermine the claims of scientific certainty:

“Once we decide what degree of temperature rise the world can tolerate, we then have to estimate what greenhouse gas concentrations in the atmosphere should be limited to, and how quickly they should be allowed to change. These are very uncertain because we do not know exactly how the climate system responds to greenhouse gases.”

“The next stage is to calculate what emissions of greenhouse gases would be allowable, in order to keep below the limit of greenhouse gas concentrations. This is even more uncertain, thanks to our imperfect understanding of the carbon cycle (and chemical cycles) and how this feeds back into the climate system.”

The conference unfolded as if such uncertainties did not exist, a mind set which I suggest can be traced back to the ECLAT-2 workshops. The major uncertainties were encapsulated in this summary from ECLAT-2:

“...uncertainty arises from two quite different sources-‘incomplete’ knowledge and ‘unknowable’ knowledge. ‘Incomplete’ knowledge affects much of our model design, whether they be climate models (e.g. poorly understood cloud Physics) or impact models (e.g. poorly known plant physiological responses to changing atmospheric nutrients).”

“‘Unknowable’ knowledge arises from the inherent indeterminacy of future human society and of the climate system. Human (and therefore social) actions are not predictable in any deterministic sense and we will always have to create future greenhouse gas emissions trajectories on the basis of indeterminate scenario analysis.”

Whilst probably not intended, I feel the main message taken away was, “An excessive emphasis on uncertainties might detract from important messages about likely consequences of climate change.”

4. THE SOCIAL CONSTRUCTION OF A QUASI-REALITY

In 2000, the Tyndall Centre for Climate Change was established, based at the University of East Anglia, with regional offices at the Universities of Manchester, Southampton, Sussex, Oxford and Newcastle, together known as the Tyndall Consortium. They interact closely with all UK agencies and with European agencies such as the Potsdam Institute, whose Director is an advisor to and ex-Research Director of Tyndall. Greenpeace are represented both at Tyndall and Potsdam; Tyndall, Potsdam and WWF are part of the European Climate Forum. There is thus a major network, including NGOs, sharing staff, data and agenda.

Tyndall aims to “exert a seminal influence on the design and achievability of the long-term strategic objectives of UK and international climate policy”. It seeks to integrate scientific and social disciplines in promoting the idea of anthropogenic climate change and to stimulate public policy initiatives on energy and transport. A

2005 working paper provided an insight into the management of global warming perception in the public domain:

*“Does tomorrow ever come? Disaster narrative and public perceptions of climate change”, was an assessment of public perception of the disaster movie, “The Day After Tomorrow”, based upon a supposed breakdown of the Thermo-Haline Circulation.*¹⁴

The researchers acknowledged this as an extremely unlikely event, concluding that the science was too uncertain and subjective judgements were not appropriate. They further commented that there was no globally accepted consensus on the likelihood or extent of rapid climate change and agreement among scientists and policy makers over the ‘danger’ posed by abrupt changes in the climate system appeared unlikely.

However, DEFRA and the Natural Environmental Research Council, still promote the idea via the Rapid Climate Change website:

*“Luckily the new ice age from ‘The Day After Tomorrow’ is fiction, not future. But strange as it seems, global warming might bring colder winters to the UK and parts of North-West Europe. And if it happens, the change could take place over only a decade or so.”*¹⁵

Tyndall researchers found that that after viewing the film, more viewers were motivated to act on climate change than before and less than 5 percent believed that there was no point in taking action. There was increased but short-lived awareness of climate change and the public were unclear what personal measures they could take to mitigate climate change. (The growth of the ‘carbon footprint’ meme seems to have addressed this, we can all save the planet by reducing our own footprint, but only if we ‘act now’.)

The paper suggests the use of ‘trusted messengers’ to improve credibility in the communication of climate change to lay audiences, after Moser and Dilling (2004: p.41.) Briefly, this translates as using industry leaders to communicate with industry audiences, religious leaders to provide a moral argument and artists and musicians to translate the ‘dry’ scientific matter, into a “deeply human affair”.

One need only think of recent statements from prominent people such as Sir Richard Branson, the Archbishop of Canterbury and various actors and pop stars to see the successful implementation of this approach.

The socio-psychological mechanisms at work were skilfully identified in another Tyndall working paper ‘The Social Simulation of the Public Perception of Weather Events and their Effect upon the Development of Belief in Anthropogenic Climate Change.’¹⁶

The paper is described as ‘presenting a quantitative dynamic simulation model of the social construction of a quasi-reality, a reality thus far defined by expert knowledge and surrounded by uncertainty.’

“...forces act to maintain or denounce a perceived reality, which has already been constructed. That is, an issue introduced by science (or media for that matter) needs continual expression of confirmation if it is to be maintained as an issue. How do people make sense or construct a reality of something that they can never experience in its totality (climate) and a reality that has not yet manifested (i.e. climate change)?”

They further question how a belief in global warming, or climate change can be maintained in the public perception in order to support heavily contested potential policy changes. The paper concludes that to endorse policy change, people must *believe* that global warming will become a reality sometime in the future. This is embodied in the oft-repeated phrase, ‘ten years to save the planet’. (In commerce, the use of a time-limited offer is a basic selling tool and induces a sense of urgency and a call to action.)

The most telling observation concerns the language used to describe the concept of global warming. They note that if the term ‘global warming’ is used, only positive temperature anomalies will be seen as indicating change, whereas if ‘climate change’ is used then both positive and negative anomalies can be seen as indicators of change. It is proposed that where climate change is the term used in preference to global warming, that unseasonably *cold temperatures* should also be interpreted as a sign of *global warming*.

This approach is seen quite widely; when the public question the reality of global warming in the midst of a cold spell, they are told it is to be expected, as a result of increasing carbon emissions.

Tyndall input can be found in most official reports and statements on climate matters, very significantly with the Intergovernmental Panel on Climate Change, (IPCC) and the Stern Review, but also in a myriad other initiatives, for example:

“Carbon Rationing to save the planet”, January 2004: “Carbon cards...each adult would be given a smart card that only allows them to use a certain amount of carbon ‘units’. Every year the nation’s total number of units would decrease, thus reducing greenhouse gases.”¹⁷

Air travel: “Everyone’s carbon dioxide emissions must go to zero to allow for aviation pollution, reveals major analysis of UK climate change targets.” September 2005¹⁸

5. A MATTER OF RECORD

The Met office publishes monthly temperatures for the UK, usually presented as charts of ‘anomalies’ compared to the ‘average’ thirty-year period 1961-1990. This was a fairly cold period whose temperature record is invariably exceeded by present day figures.

One of the longest running temperature records in the world is the Central England Temperature record, (CET).¹⁹ Examination of that record demonstrates a lack of correlation between atmospheric CO₂ levels and temperature over varying comparison periods, including the twentieth century. (The Central England Temperature is based on a paper by Gordon Manley: Manley, G., 1974: Central

England temperatures: monthly means 1659 to 1973. *Quarterly Journal of the Royal Meteorological Society*, 100, 389–405.)

Since 1997 to date, each yearly report by the Met Office contains one or all of the words and phrases, ‘warmest, highest, hottest’, or, ‘since records began.’ For example, 2006 was a year for the record books:

“In the UK, the year has been remarkable, with the Central England Temperature series setting a succession of records.” It included the ‘warmest ever autumn’ with a mean temperature of 12.6°C.²⁰

The CET record shows however, that in 1729–31, 278 years previously, there were three successive hot autumns, 11.6°C, 11.8°C, and 11.8°C respectively. The difference of 0.8° is hardly significant over that time scale and September of 1729 was, until 2006, the hottest such month in the whole of the record from 1659.

The Climatic Research Unit (CRU) acknowledges these earlier warm periods but doesn’t explain the lack of a CO₂ link.

...seasonal and annual temperatures for the entire CET series...show unprecedented warmth during the 1990s, but earlier decades such as the 1730s and 1820s are comparable.²¹

The 2006 press release lists the ‘top ten warmest years’, and their mean difference from 1961–90. Eight of those years occurred within the last 17, but 1959, a comparable year to 2004, was omitted, as were 1921, 1834 and 1733, only 0.01°C lower at a time when carbon dioxide levels were considerably less. If the situation were reversed to promote global cooling, a similar press release in 1698 for example, could have said, “Eight of the coldest years have occurred in the last fifteen”. Rather than more extreme weather, the trend has been for a smaller range and a move away from the desperately cold times of earlier centuries. Temperatures from 1949 to 1986 show a downward trend, but in just five years from 1986 to 1990, they rose by almost 2 degrees, to stabilize since that point. Such a history is not consistent with a cause and effect, linear increase in CO₂.

From 1961–1990, atmospheric CO₂ increased by 11.5 percent, yet the period average temperature was lower than 1931–1960. In that period, atmospheric CO₂ increased by a lowly 4 percent, yet the temperature average was 0.35°C higher than 1901–1930. Therefore, for the twentieth century, a direct temperature response to increasing atmospheric CO₂ levels is not apparent in the CET record.

In 2005, CET had decreased by 0.19°C from the high point of 10.63 in 1990 and although matched in 1999, there was no increase above 1990 levels until 2006. Of the last eleven years, seven show negative temperature change in spite of linear increases in CO₂. In the UK at least, temperature and CO₂ seem to be heading in opposite directions.

6. GLOBAL WARMING ‘BEYOND ARGUMENT’

However, the drive to convince the public otherwise was exemplified in a speech by the Rt Hon David Miliband MP, DEFRA, at the Audit Commission annual lecture, 19 July 2006:

“So the science is increasingly stark. The potential to solve climate change is increasingly in our hands. Public awareness and concern has never been higher. The challenge is to translate awareness into action.”²²

A government-favoured think tank, the Institute for Public Policy Research, (David Miliband was an IPPR Research Fellow in the 1990s), had the following advice for public agencies interfacing with the public:

“...it is our recommendation that, at least for popular communications, interested agencies now need to treat the argument as having been won.”

“This means simply behaving as if man-made climate change is real, and that individual actions to prevent further change will be effective. The UK Government’s new climate-change slogan—‘Together this generation will tackle climate change’ (Defra 2006)—is but an example of this approach. It constructs...its own factuality.”²³

Since 2001, DEFRA has spent £110 Million on environmental campaigns, a major part of which is devoted to promoting the concept of anthropogenic global warming.²⁴

CONCLUSION

It is clear that without continued reinforcement through press releases and media campaigns, public belief in global warming would be suspended. If the facts really did speak for themselves, there would be no need for the “science by press release” approach, designed to manipulate public perception. Unfortunately the separate issue of energy security has become entwined with that of global warming, introducing a major distortion to the most appropriate direction for energy policy in the coming decades.

REFERENCES

1. <http://www.dti.gov.uk/energy/sources/coal/industry/page13125.html>
2. <http://www.planetark.com/dailynewsstory.cfm/newsid/42547/story.htm>
3. <http://www.defra.gov.uk/corporate/ministers/pdf/milibandtopm-letter060711.pdf>
4. <http://www.conservatives.com/tile.do?def=news.topic.page&topic=ENV>
5. <http://met.no/english/climate/index.html>
6. http://andvari.vedur.is/vedurfar/yfirlit/index_en.html?
7. <http://climate.gi.alaska.edu/ClimTrends/Change/TempChange.html>
8. <http://pafc.arh.noaa.gov/climvar/climate-paper.html>
9. <http://climate.gi.alaska.edu/Bowling/FANB.html>
10. <http://climate.gi.alaska.edu/Bowling/AKchange.html>
11. <http://www.cru.uea.ac.uk/eclat/>

12. <http://www.stabilisation2005.com/>
13. <http://www.metoffice.gov.uk/research/hadleycentre/pubs/brochures/index.html>
14. http://www.tyndall.ac.uk/publications/working_papers/wp72_summary.shtml
15. <http://www.noc.soton.ac.uk/rapid//sis/sistop.php>
16. http://www.tyndall.ac.uk/publications/working_papers/wp58_summary.shtml
17. http://www.tyndall.ac.uk/media/press_releases/pr_30.pdf
18. http://www.tyndall.ac.uk/media/press_releases/tyndallpr21sep.pdf
19. http://www.metoffice.gov.uk/research/hadleycentre/CR_data/Daily/HadCET_act.txt
20. <http://www.cru.uea.ac.uk/cru/info/ukweather/>
21. <http://www.metoffice.gov.uk/corporate/pressoffice/2006/pr20061214.html>
22. <http://www.defra.gov.uk/corporate/ministers/speeches/david-miliband/dm060719.htm>
23. <http://www.ippr.org.uk/publicationsandreports/publication.asp?id=485>
24. <http://www.theyworkforyou.com/wrans/?id=2007-03-06a.117329.h&s=climate+change#g117329.r0>



Science & Public Policy Institute

"Science-based policy for a better world."

Robert Ferguson

SPPI President

bferguson@sppinstitute.org

202-288-5699

P.O. Box 209

5501 Merchants View Square

Haymarket, VA 20169

www.scienceandpublicpolicy.org

