

# Policy Briefing

## Science or Swindle? The Truth About the Climate

In remembering the 1807 Slave Trade Act, we may wonder what current habits of thought and action will seem abhorrent in 200 years time. The culture of enslavement relied on blindness to that of God in other people – a failure of compassion – along with the obsession of a minority with the pursuit of profit and power, based on rapidly growing consumption in Europe. Climate change results from many of the same forces – driven by consumerism, allowed by a failure of compassion for those who will suffer and are suffering already.

This year the Intergovernmental Panel on Climate Change (IPCC) is releasing its Fourth Assessment Report. The central message from Working Group I (released in February) was that there is now little question that human activity is causing climate change. The Working Group II report (in April) told us that there is now considerable evidence that the impacts of climate change are already happening. Over the next few years we can expect increasing pressure on water and food supplies, especially in Africa but eventually in other parts of the world. Some regions may become uninhabitable. The report of Working Group III, released in early May, struck a more positive note. It found that, if policies and measures are introduced to reduce greenhouse gas emissions by 50-85% by 2050, the global temperature rise can be limited to 2-2.4°C. Abatement measures might have an economic cost but it would mean at most a 5% reduction in global GDP in 2050.

The IPCC is the final authority on climate science. National academies of science and virtually all climate experts endorse its findings and call for urgent action to cut CO<sub>2</sub> emissions. But just as moral justifications for slavery were found in the 18<sup>th</sup> century, “experts” (though not usually climatologists) can now be found to deny human responsibility for our planet. Earlier this year *The Great Global Warming Swindle* on Channel 4 painted climate change as a ruse perpetrated by scientists hungry for research grants. British environmentalists and scientists have responded in force (see box).

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### The climate debate

(based on response to *The Great Global Warming Swindle* by John Houghton, former co-chair of IPCC Working Group I; for more responses and resources see <http://coinet.org.uk>).

#### Examples of the sceptics' arguments

Current warming is within the climate's natural variation

Increasing CO<sub>2</sub> in the atmosphere is driven by temperature rather than the other way round

The observed warming is only at the Earth's surface – satellite observations show that the atmosphere is not warming as predicted by climate modellers.

Changes in solar output have been the main driver of increasing temperatures in the 20<sup>th</sup> century

Climate models are too complex and uncertain to provide useful projections of climate change. They leave out important interactions between atmosphere and oceans, the effects of clouds etc.

#### Response from the scientific community

Not true. The warming since 1750 is faster than at any time since the last ice age

In fact CO<sub>2</sub> and temperature are closely coupled. Current CO<sub>2</sub> increases can only be explained by human activity. Theory and observation confirm that this is resulting in warming, which may cause further CO<sub>2</sub> release.

This is out of date. Early satellite observations were not well-calibrated so they didn't provide firm evidence. Ongoing measurements and analysis have proved that the atmosphere is warming as expected.

While solar variation contributed to temperature changes before 1940, detailed observation and analysis proves that solar variation cannot be the main cause of global warming in the last 40 years.

While this was true in the 1980s (when one of the scientists' statements used on Channel 4 was made), current models include very detailed simulation of ocean, atmosphere, ice and biosphere interactions. They reproduce actual climate variations very accurately.

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The IPCC process has very high integrity and transparency. In putting together writing teams for each report, particular attention is paid to including experts with dissenting positions. The reports are not a cosy consensus. It takes typically about two years' hard work for the authors to establish a text to which they can agree. There is an extensive review process with comments invited from experts in business and campaigning organisations as well as the scientific community. Review editors ensure that the Lead Authors consider each comment carefully, recording an explanation of their response.

It is not a matter of "believing" in climate change. The authors may say only what is supported by peer-reviewed scientific literature. The last IPCC Assessment, in 2001, was much less certain of climate change predictions. Since then a huge amount of evidence has accumulated to show that changes are underway and to disprove the arguments of the sceptics.

Good science is no more a matter of voting or majority views than a good Quaker meeting for worship for business. It is a collective process involving careful testing of theory against observation and mutual checking of others' observations; searching for counterexamples; engaging with contrary voices and, ultimately, trying to state exactly what is not known, what is known, and how it is known. In Quaker business method, a single Friend's ministry can bring the meeting to a radical reconsideration of its minute. Similarly, in developing an IPCC report, a single well-founded critique can lead to part of the message being dropped or radically changed.

The IPCC is not perfect. Lead Authors are nominated by governments and other UN accredited organisations, and selected by a committee of government representatives who are mostly scientists themselves. Early IPCC assessments were dominated by natural scientists from the United States and Britain. It has taken considerable effort to find experts from the global south, and to make sure they make a real contribution once they are involved. Despite an early recognition that social scientists must also be involved, it is a slow process identifying and engaging new disciplines and perspectives.

Climate change is a special kind of problem. The science and human dimensions are hugely complex; there are many uncertainties; yet it is urgent that we understand what is happening and our role in it. The IPCC has said little about mechanisms that could generate runaway global warming, for which the evidence is not yet well-developed. These include methane emissions from melting permafrost and CO<sub>2</sub> emissions from deteriorating tropical soils. Nor do the recently released reports deal with recent evidence for unexpectedly rapid break-up of ice sheets. But in reaching their conclusion that human activity is causing climate change, the authors have looked carefully at all of the issues raised by the sceptics. The findings are robust.

Public debate about climate science may be a displacement activity. It is easier to argue about the need to change than to actually change ourselves.

Consumerism is a trap. The car-dependent society that has developed since the 1950s has not brought us better health or quality of life. Many people now struggle with enslavement to sugary, fatty foods, to TV or the Internet, and to the relentless cycle of work and spend.

In the biblical story of the Exodus, it took 40 years in the wilderness and the death of the enslaved generation for the Israelites to develop a society that could aspire to live by Holy Law – with justice in human relations and in the relationship to the land. That's about the length of time we have now to achieve a similar transformation on a planetary scale.

Briefing prepared by Laurie Michaelis, Oxford Quaker Meeting, June 2007. Laurie was a Convening Lead Author in the IPCC *Second Assessment*, and a Lead Author in the *Third Assessment*, the *Special Report on Emission Scenarios* and the *Special Report on Methodological and Technological Issues in Technology Transfer*.

For further information e-mail [laurie@livingwitness.org.uk](mailto:laurie@livingwitness.org.uk) or telephone 01865 725244