



Grantham Research Institute on
Climate Change and
the Environment

**Submission to inquiry on ‘Climate: public
understanding and policy implications’ by the
House of Commons Select Committee on
Science and Technology**

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Policy paper

June 2013

**Grantham Research Institute on Climate Change and
the Environment**

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Inquiry into ‘Climate: Public understanding and policy implications’ by the House of Commons Science and Technology Committee

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April 2013

1. This submission begins with a summary of the importance of public understanding of climate change, before considering some of the latest research on the state of public understanding of the science of climate change, and subsequently drawing attention to the impact of climate change ‘sceptics’, the media and climate researchers.

The importance of the public understanding of climate change

2. There is overwhelming scientific evidence that emissions of greenhouse gases from human activities, particularly the burning of fossil fuels, is causing the Earth to warm and that unmitigated climate change poses huge risks for human societies in the UK and across the world.
3. The UK is already experiencing the direct impacts of climate change, with the average annual temperature recorded by the Met Office having increased by about 1°C since 1970, and provisional figures show an increase in heavy rainfall over the past few decades. The UK is implementing a range of measures to adapt to those impacts that cannot now be avoided, and to mitigate future climate change by, for instance, reducing its annual emissions of greenhouse gases.
4. It is crucially important that the UK public understands the direct and indirect risks that unmitigated climate change poses, and the options that exist for managing these risks, in order that they can make informed choices and participate in decision-making processes. However, it is important to recognise that public understanding of the science of climate change does not automatically result in public support for particular policies and measures to manage the risks.

The state of UK public understanding of climate change

5. The assessment of the UK public understanding of climate change is hampered by the lack of consistent long-term monitoring. The UK Government Departments have surveyed public attitudes on an ad hoc and inconsistent basis, which makes it very difficult to evaluate long-term trends. A very useful survey of the public understanding of climate change was carried out in seven waves by the UK Government’s former Central Office of Information (COI) for the Department for Environment, Food and Rural Affairs (DEFRA) between March 2005 and March 2008. This comprehensive survey consisted of almost 30 questions about the causes

and consequences of climate change, and policy options, but was discontinued after the creation of the Department of Energy and Climate Change (DECC) in October 2008. We have focused here mainly on those more recent tracking surveys that have monitored responses to consistent questions over a number of years.

6. The IPCC (2007a) set out mainstream science's fundamental conclusions about the causes and consequences of climate change with the following statements, against which the public understanding of climate change can be compared:
 - warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level;
 - most of the observed increase in global average temperatures since the mid-20th century is *very likely* due to the observed increase in anthropogenic greenhouse gas concentrations; and
 - continued greenhouse gas emissions at or above current rates would cause further warming and induce many changes in the global climate system during the 21st century that would *very likely* be larger than those observed during the 20th century.
7. The Department for Transport (DfT) published a series of annual surveys of UK public attitudes to climate change and transport which was carried out between August 2006 and August 2011 (for example, see DfT, 2012). It showed that the proportion of the public who were at least fairly convinced that climate change is happening fell slightly from 87 per cent in August 2006 to 83 per cent in August 2009, before dropping to 74 per cent in August 2010. This larger decrease between 2009 and 2010 may have been due, at least in part, to publicity about controversies over e-mails that were hacked from the Climatic Research Unit at the University of East Anglia (UEA) and disseminated in November 2009, and the admission in January 2010 by the IPCC that a volume of its Fourth Assessment Report (IPCC, 2007b) contained a small but significant mistake about the speed with which the Himalayan glaciers would disappear at current rates of melting (IPCC, 2010). This survey for the DfT recorded a decrease in the proportion of the public who believed that particular sources of greenhouse gas emissions, such as road transport, contribute to climate change. It also showed a decline in the percentage who reported being at least fairly concerned about climate change, from 81 per cent in August 2006 to 65 per cent in August 2011. The survey was discontinued by the Department for Transport after August 2011.
8. The DECC commenced a public attitudes tracker in March 2012, but it only includes two questions about climate change (for example, see DECC, 2013). It found in March 2012 that 65 per cent of the UK public were at least fairly concerned about climate change, and 38 per cent think that climate change is caused mainly or entirely by human activities, with a further 42 per cent indicating that natural processes and human activities are both partly responsible.
9. A survey carried out between January and March 2010, and reported by Poortinga *et al.* (2011), found that only 57 per cent of the public in Great Britain tend to agree or strongly agree that most scientists have concluded that humans are causing climate change, even though no major scientific organisation in the world disagrees with the IPCC attribution of global warming to greenhouse gas emissions from human

activities. However, the authors concluded that “climate scepticism is currently not widespread in Britain”.

10. A YouGov survey of the public in Great Britain in February 2013 found that 28 per cent trusted senior academics working in the field of climate science a great deal, generally speaking, to tell the truth about climate change, with a further 41 per cent trusting this group a fair amount. However, less positive results were obtained when a question about trust was asked in a different way. Shuckburgh *et al.* (2012) reported the results of a survey of the UK public carried out in March 2011 which found that only 38 per cent tended to agree or strongly agreed that “climate scientists can be trusted to tell us the truth about climate change”, with 25 per cent reporting that they neither agreed nor disagreed.
11. Overall, the public opinion surveys show the following trends:
 - a large majority of the public agree to some extent that climate change is happening, although this percentage has declined by a small amount since 2009-10;
 - a large majority of the public agree to some extent that human activities are contributing to global warming, although this percentage has declined by a small amount since 2009-10;
 - a small majority of the public agree to some extent that most scientists have concluded that global warming is caused mainly by human activities;
 - a majority of the public is concerned about climate change, but this has decreased, particularly since 2008; and
 - there is mixed evidence about the extent to which the public trust climate scientists to tell the truth about global warming.
12. The decline in public acceptance of the basic science of climate change, and the decrease in trust in climate scientists, is very probably due mainly to the publicity about the controversies over climate science in 2009-10. The decline in public concern about climate change is very likely due to an increase in worries about the economy since the start of the financial crisis and global downturn in 2008.

The impact of climate change ‘sceptics’ on public understanding

13. The significance of the UEA hacked e-mails and the mistake in the IPCC (2007b) report was misrepresented by climate change ‘sceptics’ (ie those who reject the conclusions of mainstream climate science). For instance, the Global Warming Policy Foundation, which was officially launched by Lord Lawson of Blaby just three days after the e-mails were published on ‘sceptic’ websites, falsely alleged in an article in ‘The Times’ that the e-mails showed that “scientists have been manipulating the raw temperature figures to show a relentlessly rising global warming trend” (Lawson, 2009).
14. The representatives of the Global Warming Policy Foundation continue to disseminate inaccurate and misleading information to the public through its website (eg see Ward, 2011a), speeches (Ward, 2011b) and comments to the national media (Ward, 2011c). It is somewhat surprising that the Foundation, which is a registered charity with fewer than 120 members (Ward, 2013a), has not been held to account by the Charity Commission for persistently misleading the public, given that the

‘Guidance on Campaigning and Political Activity by Charities’ (Charity Commission, 2008), states: “A charity can campaign using emotive or controversial material, where this is lawful and justifiable in the context of the campaign. Such material must be factually accurate and have a legitimate evidence base.”

15. In addition, the Foundation, whose primary activity is campaigning against UK and European Union policies to mitigate climate change, has attacked climate scientists for a lack of transparency, yet refuses to reveal the sources of more than £1 million in donations which it has received (Ward, 2013a).
16. The primary way in which climate change ‘sceptics’ damage the public interest is through the spread of inaccurate and misleading material via websites to sympathetic journalists in the mainstream media, creating an ‘echo chamber of climate change denial’ (Ward, 2012a).

The impact of the media on public understanding

17. There is evidence that the broadcast by Channel 4 in March 2007 of ‘The Great Global Warming Swindle’ damaged public understanding of the science of climate change (Downing & Ballantyne, 2007). Following complaints about the programme, Ofcom carried out a year-long inquiry, but failed to investigate whether the programme was inaccurate or misleading on the grounds that the Broadcasting Code does not require documentaries to be factually accurate. In its ruling, Ofcom (2008) stated: “In dealing with these complaints therefore Ofcom had to ascertain - not whether the programme was accurate - but whether it materially misled the audience with the result that harm and/or offence was likely to be caused”.
18. Although much of the BBC’s coverage of climate change is high quality, there are some systematic failures to prevent its audiences from receiving inaccurate and misleading information. This is despite a review for the BBC Trust of the impartiality of the BBC’s science coverage, published in 2011, which warned that climate change ‘sceptics’ were sometimes being given disproportionate coverage and were not being challenged when they made inaccurate and misleading statements. In particular, inaccurate and misleading information is broadcast through presenter-led BBC radio and television programmes which seek to feature a ‘balanced’ debate between climate change ‘sceptics’ and mainstream climate researchers. A particularly persistent purveyor of inaccurate and misleading information about climate change is ‘The Daily Politics’ (Ward, 2011d, 2012b). A follow-up to the BBC Trust review in November 2012 failed to acknowledge that some programmes are continuing to broadcast inaccurate and misleading information about climate change.
19. However, much greater damage to the public interest is resulting from inaccurate and misleading coverage by the UK’s national newspapers in print and online. In particular, some newspapers are able to exploit the systemic weakness of the self-regulatory system in general, and the Press Complaints Commission (PCC) in particular, which means that inaccurate and misleading statements can be published as long as they are labelled as ‘points of view’. For instance, the PCC failed to uphold a complaint about an inaccurate and misleading article by Christopher Booker, published in ‘The Sunday Telegraph’ in March 2009, in which he promoted the views of a climate change ‘sceptic’ under the headline ‘Rise of sea levels is ‘the greatest lie

ever told’, on the grounds that “its responsibility was for publishing his views accurately rather than for the accuracy of his views” (PCC, 2009). By failing to hold newspapers to account for breaches of the Editors’ Code of Practice, which specifies that “the Press must take care not to publish inaccurate, misleading or distorted information, including pictures”, the PCC has enabled other publications to mislead the public about the science of climate change (Ward, 2011e).

20. Painter (2011) found that the promotion of the views of climate change ‘sceptics’ in UK national newspapers increased sharply between 2007 and 2009-10, particularly in opinion articles in the right-wing Press. Mark Henderson, the former science editor of ‘The Times’, has attributed the increase in the promotion of ‘sceptics’ by some newspapers to the impact of the controversies over the so-called ‘Climategate’ UEA e-mails: “What climategate certainly changed though, was the media narrative. At the very moment when world leaders were discussing how to respond to climate change, the focus shifted to whether it was happening, and whether scientists could be trusted. Conservative newspapers that had softened sceptical coverage of global warming, such as the ‘Daily Mail’, became emboldened and more hostile. The BBC began to bend over backwards to balance scientific opinion with critics’ counter-claims, often using the Global Warming Policy Foundation, a new contrarian think-tank founded just as the controversy broke” (Henderson, 2012).
21. It should be noted that a large number of UK national newspapers (none of whose editors have significant science qualifications or training) now promote climate change ‘scepticism’ to some degree, with the ‘Daily Express’, the ‘Daily Mail’, ‘The Daily Telegraph’, ‘The Mail on Sunday’, and ‘The Sunday Telegraph’, persistently publishing inaccurate and misleading information from ‘sceptics’ in their print editions and on their websites.
22. One of the most important findings of the Leveson inquiry was that some newspapers publish intentionally inaccurate and misleading articles when promoting a political agenda. In his final report, Leveson stated: “I have come to the conclusion that there does exist a cultural strand or tendency within a section of the press to practice journalism which on occasion is deliberately, recklessly or negligently inaccurate”. He also pointed out that “there can be no objection to agenda journalism (which necessarily involves the fusion of fact and comment), but that cannot trump a requirement to report stories accurately”. Leveson added: “Particularly in the context of reporting on issues of political interest, the press have a responsibility to ensure that the public are accurately informed so that they can engage in the democratic process”.
23. It is clear from their coverage that a number of right-wing newspapers consider climate change to be primarily an issue of politics, rather than of science, and therefore apparently take the view that their coverage need not be constrained by considerations of whether information is inaccurate or misleading (Ward, 2013b). It remains to be seen whether any new regulatory regime that may now emerge after the Leveson inquiry will uphold the public interest any better with respect to coverage of climate change.
24. It is also important to note that the coverage of climate change by UK national newspapers has decreased sharply since 2009. A monitoring project by the University

of Colorado shows that the monthly number of articles in 2013 has fallen to a level not recorded since 2004-05 (Boykoff & Nacu-Schmidt, 2013). In addition, there has been a reduction in the number of environment correspondents in the UK media. For instance, 'The Times' reassigned its environment reporter, Ben Webster, to cover media issues in 2011, and the BBC made redundant an experienced correspondent, Richard Black, in 2012.

The impact of climate researchers on public understanding

25. Climate researchers also share responsibility for the decline in UK public understanding of climate science since 2009. In particular, they have failed to draw a line under the controversies surrounding the UEA e-mails and the IPCC (2007b) report. Rather than responding robustly to the allegations of incompetence and misconduct by strenuously defending the integrity of their profession, many climate researchers have withdrawn from the public debate, perhaps understandably fearful of becoming targets of attacks from 'sceptics'. Instead they have hoped that a series of official inquiries would set the record straight for them.
26. Although a number of separate reviews cleared the scientists at the centre of the 'Climategate' e-mails scandal of scientific misconduct, they also criticised standards of transparency. Largely as a response to 'Climategate', the Royal Society launched an initiative on 'science as an open enterprise'. The primary recommendation of its report, published in June 2012, was: "Scientists should communicate the data they collect and the models they create, to allow free and open access, and in ways that are intelligible, assessable and usable for other specialists in the same or linked fields wherever they are in the world. Where data justify it, scientists should make them available in an appropriate data repository. Where possible, communication with a wider public audience should be made a priority, and particularly so in areas where openness is in the public interest" (Royal Society, 2012).
27. So there is now an opportunity for climate researchers, and their professional institutions such as the Royal Meteorological Society, to initiate a debate about how the Royal Society's report can be taken forward, seeking to make their profession a beacon of best practice in terms of openness and transparency.

Recommendations

28. The DECC should continue to monitor public attitudes to climate change, but expand its current range of questions and align them with the previous survey by the DEFRA in order to create a consistent long-term database.
29. Public understanding of the science of climate change could be improved if the Charity Commission holds the Global Warming Policy Foundation to account for disseminating inaccurate and misleading information.
30. Any new regulatory regime for the UK Press should seek to uphold the public interest by remedying the current situation whereby some newspapers apparently feel that they can promote, with impunity, inaccurate and misleading information about climate change.

31. Climate researchers should seek to serve the public interest by playing a more integral role in the process of public debate and policy-making, by (Ward, 2013c):
- engaging the public more effectively through direct and indirect methods;
 - learning more about the information needs of the public (i.e. through two-way communication);
 - improving the explanation and presentation to public audiences of challenging concepts such as risk and uncertainty;
 - implementing a strategy for improving the reputation of the climate research profession for trustworthiness, particularly in terms of transparency;
 - increasing efforts to influence the narratives on climate change that are being promoted by the media;
 - dealing more effectively with criticisms of, and attacks on, mainstream climate research; and
 - engaging policy-makers at international, national and local levels more effectively through direct and indirect methods.

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