

Topic : Evidence to inform policy

Theme: Confidence in climate science

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Government position: The Government recognises that while there is no single 'consensus' on an issue as complex as climate change, the overwhelming body of evidence demonstrates that climate change is real and caused by human activities, and that this view is held by the vast majority of practising climate scientists.

Concept of Consensus

- Climate change is complex and multi-faceted. The notion that there is a single scientific 'consensus' on climate change is unrealistic for many reasons:
 - Many aspects of climate science – particularly impacts – are subjects of active scientific research and subject to the uncertainty and disagreement that goes along with this.
 - The level of perceived threat from climate change is inherently linked to the assumptions made about future generations' ability to adapt, as well as an individual's appetite for risks.
 - There are a number of potential responses to climate change (adaptation, mitigation, geo-engineering) each with their own benefits and risks.
- Thus, the academic fields of climate science, impacts, mitigation and adaptation contain areas of active uncertainty and disagreement amongst researchers, as would be expected in any area of science.
- Nonetheless there is a broad consensus and high certainty around the core principles of climate science. This certainty was explicitly examined by the Royal Society in a 2010 study, which concluded:

"There is strong evidence that changes in greenhouse gas concentrations due to human activity are the dominant cause of the global warming that has taken place over the last half century. This warming trend is expected to continue as are changes in precipitation over the long term in many regions."

- The Royal Society also concluded that uncertainties were not a reason not to act:

"Like many important decisions, policy choices about climate change have to be made in the absence of perfect knowledge. Even if the remaining uncertainties were substantially resolved, the wide variety of interests, cultures and beliefs in society would make consensus about such choices difficult to achieve. However, the potential impacts of climate change are sufficiently serious that important decisions will need to be made."

- Those sceptical of the science of climate change often claim that a significant proportion of climate scientists are uncertain about the human-induced nature of

climate change. This is not true. While some of those who question the human-induced nature of climate change do indeed have a scientific background, these views are very uncommon indeed within the scientific community that actively practices climate science.

- Some individuals have attempted to create lists or petitions of scientists who 'believe' or 'do not believe' in human-induced climate change. Some research groups have also attempted to test this formally. For example, a 2010 paper in Proceedings of National Academies of Scientists found 97–98% of the climate researchers most actively publishing in the field “support the tenets of ACC (Anthropogenic Climate Change) outlined by the Intergovernmental Panel on Climate Change”.
- Nonetheless, it is important to note that such petitions and lists generally poorly capture the complexity of the issues involved. Scientists generally express levels of certainty and consensus through the work they publish in the scientific literature and polls are poor substitutes for this body of knowledge.
- Many climate scientists have expressed concern that the desire for 'balance' in reporting on climate change results in those sceptical of human-induced warming receiving disproportionate media attention.
- A recent review of science reporting by Professor Steve Jones for the BBC Trust explores this issue in detail. He describes a “microcosm of false balance” around climate change. The review concluded that over-rigid applications of BBC editorial guidelines can at times give undue attention to marginal opinions on scientific issues including climate change. He recommends a new approach, considering due weight of opinion when striking a balance.
- Links to other core scripts
 - Questions of 'consensus' in climate change are often raised by those sceptical of climate change, and the content in briefings on 'Climategate' are also relevant:
Topical issues > Climategate > IPCC error concerns
Topical issues > Climategate > CRU

External links

- IPCC Reports provide the best assessment of the state of knowledge in the science of climate change: www.ipcc.ch
- In 2010, the Royal Society produced a 'short summary of the science' which explicitly assesses levels of certainty and consensus:
http://royalsociety.org/uploadedFiles/Royal_Society_Content/policy/publications/2010/4294972962.pdf
- The BBC Trust reviewed the impartiality of its science broadcasting in 2011, covering climate science and issues of consensus:
http://www.bbc.co.uk/bbctrust/assets/files/pdf/our_work/science_impartiality/science_impartiality.pdf

