

## Understanding emotional responses to climate change

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**People's values and beliefs about climate change, and how these influence their actions, is a complex relationship – and one that is increasingly important as all tiers of government grapple with designing climate change policies and actions.**



Credit: NSW Maritime / Janet Kavanagh.

Presentation of the facts and figures about a changing climate, even when flanked by relevant images, for instance, of melting glaciers and drowning submerging islands, has left Australians wondering about who and what to believe. We know surprisingly little about people's values and beliefs about climate change, either in Australia or other cultural contexts. Most research on 'attitudes' to date has focused on how people understand the science of climate change, rather than react to it.

A CSIRO synthesis in early 2011 found that Australians largely support the need for action, but are confused about climate change and appropriate policy responses. Commissioned by the Garnaut Review 2011 team, the synthesis looked at 22 recent Australian surveys of climate change attitudes undertaken by universities, CSIRO units and media organisations between 2008 and 2011. While the studies asked a diverse range of questions about climate-related issues, they are clear in showing that most Australians believe the climate is changing – about 75 per cent depending on how the question is framed.

Deeper investigation on the belief in climate change comes from the 2010 CSIRO Baseline Survey which showed that Australians remain divided about the cause of climate change. Initiated and funded by CSIRO's Climate Adaptation Flagship, the survey of 5036 people from across Australia occurred in July and August just prior to the federal election. Administered by the company Online Research Unit it used a representative group of participants who nominate to participate in research surveys.

The most comprehensive survey of Australian climate change attitudes to date, the Baseline Survey found that about

half of the 5000-plus respondents believe that humans were causing climate change. Just over 40 per cent considered that the changing climate was due solely to natural causes. On the other hand, less than six per cent said the climate was not changing at all, and less than four per cent were unsure.

Lead author of the report, CSIRO social scientist Ms Zoe Leviston, considers that thinking of climate change as a natural phenomenon may constitute a form of 'interpretive' denial in which the facts themselves are not denied but given a different interpretation. Factual reinterpretation is one of three distinct types of denial conceived by UK sociologist Stanley Cohen. The other types are literal denial – an outright rejection of the facts – and implicatory denial – a rejection of psychological and moral implications which results in a lack of behavioural responses, even when human-induced climate change is accepted.



Credit: James Porteous

Report coauthor and group leader for the CSIRO's Adaptive Behaviours team, Professor Iain Walker has further explored the Baseline Survey responses to understand the role of emotions in people's responses. Emotional responses are critical because of their central role in motivated decision-making and behaviour. Professor Walker's research has shown that people who believe climate change is caused by humans are experiencing different emotions to those who consider climate change is natural or not happening.

Professor Walker identified that fear is the strongest emotional response from those who accept that humans have a role in climate change. Fear can induce different responses as some people will respond with more climate-friendly actions while others will withdraw from the issue. 'Fear may cause some people to feel overwhelmed or powerless that their actions may make no difference,' Professor Walker said.

For those who believe that climate change is natural, the strongest emotional response is irritation. Irritation is likely to be a barrier to any attempt to communicate more information about climate change. 'If your first response to anything to do with climate change is irritation, you're unlikely to pay any attention to scientific information,' Professor Walker said. Irritation will lead to a failure to engage with anything related to climate change, and generally to inhibit pro-environmental behaviours.

These differences are strongly linked to people's political preferences. Survey participants intending to vote Liberal, National or for Independents, were more likely to state that climate change is due solely to natural variations in Earth's temperatures. Those who intended to vote for the Greens or Labor were more likely to state belief in human-induced climate change.

The survey also showed differences in trusted sources of information on climate change. While all respondents consider university scientists to be the best source of information, those who consider climate change to be natural tend to trust their friends and family, and even their doctors, for information on climate change. In contrast, those who consider climate change to be human-induced tend to favour information from environmental groups and environmental scientists. All groups listed government, car companies and oil companies as the least trustworthy for information on a changing climate.

Ms Leviston says 'the CSIRO Baseline survey indicates that the obvious challenges for communicating about a changing climate are how to design messages for different audiences that facilitate rather than constrain action.' She explained that the survey provides guidance for climate change communication strategies and for climate change adaptation planning. 'If we can identify how different messages produce different emotional and moral responses, under which conditions, and what subsequent behaviours result, then we are better placed to talk about climate change mitigation and adaptation in a way that's meaningful and relevant for everyone.'

More information

CSIRO Baseline Survey: [www.csiro.au/resources/Climate-change-attitudes-online-survey](http://www.csiro.au/resources/Climate-change-attitudes-online-survey)

CSIRO synthesis report for Garnaut: [www.garnautreview.org.au/update-2011/commissioned-work/australians-view-of-climate-change.htm](http://www.garnautreview.org.au/update-2011/commissioned-work/australians-view-of-climate-change.htm)

Zoe Leviston's research: [www.csiro.au/people/Zoe.Leviston](http://www.csiro.au/people/Zoe.Leviston)

Iain Walker's research: [www.csiro.au/people/Iain.Walker](http://www.csiro.au/people/Iain.Walker)

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