

**From:** "Graham" <grahamhw@iprimus.com.au>  
**Subject:** FW: My first email to Kevin Hennessy and his response  
**Date:** 10 February 2012 4:19:45 PM AEST  
**To:** <malcolmr@conscious.com.au>

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You note he concedes the science is NOT settled.

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**From:** Kevin.Hennessy@csiro.au [mailto:Kevin.Hennessy@csiro.au]  
**Sent:** Thursday, 1 December 2011 10:27 AM  
**To:** grahamhw@iprimus.com.au  
**Cc:** S.Power@bom.gov.au; d.jones@bom.gov.au; Simon.Torok@csiro.au  
**Subject:** Pacific climate change report: analysing the regional impacts of climate change

Dear Graham,

In your reply to Scott Power, you claim that our "report not only fails to make any serious attempt to clarify the effects of humans upon climatic factors but rather, to the contrary, seeks to underline the uncertainty".

Firstly, doing new research on human contributions to climate change in the Pacific was not within our terms of reference, but we plan to address this in the next 18 months. This is because there are very few "attribution" studies focussed on the western tropical Pacific, so the causes of climate change in this region are not well understood. However, the studies that are available in the peer-reviewed literature indicate a human contribution to some aspects of climate change in the Pacific, as noted in Chapter 3 of our report and summarised on page 52.

Secondly, for other parts of the world, there is substantial peer-reviewed evidence for a human contribution to some aspects of climate change. This is reviewed in Chapter 9 the IPCC (2007) Working Group 1 report [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/ch9.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch9.html) and more recently in the paper by Stott et al (2010: <http://onlinelibrary.wiley.com/doi/10.1002/wcc.34/abstract>). In summary:

- Most of the warming since the mid-20th century is very likely (more than 90% confidence) due to anthropogenic increases in greenhouse gases (IPCC, 2007)
- Discernible human influences include:
  - ocean warming, tropospheric warming and stratospheric cooling, continental-average temperatures, temperature extremes and wind patterns (IPCC, 2007)
  - less Arctic sea ice, changes in the hydrological cycle, global and regional patterns of precipitation changes, and increases in ocean salinity in the tropical Atlantic (Stott et al., 2010).

The science is not settled. The IPCC (2007) Synthesis Report (Chapter 6) lists the robust findings and key uncertainties. The robust findings provide multiple lines of evidence for the risks and opportunities posed by climate change, and the need to manage these issues. Peer-reviewed literature published since the IPCC report, including our report on Pacific climate change, has strengthened many of these findings. The uncertainties (also summarised on page 11 of our Pacific report) are being addressed by ongoing research and must be borne in mind by decision-makers.

In the Australian context, CSIRO published a book in April 2011 titled "Climate change: science and solutions for Australia" <http://www.csiro.au/en/Outcomes/Climate/Climate-Change-Book.aspx>. This is one of the ways in which we provide advice to government and a range of other members of the community.

Regards

Kevin.

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**From:** Graham [mailto:grahamhw@iprimus.com.au]  
**Sent:** Tuesday, 29 November 2011 7:12 AM  
**To:** Hennessy, Kevin (CMAR, Aspendale)  
**Subject:** Mr Kevin Hennessy: analysing the regional impacts of climate change

Dear Kevin,

Your latest CSIRO/BOM climate report (1), made the following astounding claim (2):

*“Trends in climate are evident over the Pacific as a whole, including the PCCSP region, however the extent to which these trends are attributable to natural variability and to human activities is not yet well understood.”*

In light of this startling report, and as chief scientific advisors to the Commonwealth government, will the CSIRO be officially advising the government that the science pertaining to human caused climate change is too uncertain and misunderstood to form the basis of government policy? Or has the CSIRO already advised the government it would be foolish to base policy on such a poorly understood area of science?

The report underlines the uncertainties and unreliability of models (3):

*“The climate projections are subject to a great deal of uncertainty, both in terms of the limitations of the models on which they depend, and uncertainty about future global greenhouse gas emissions.”*

In contrast with earlier CSIRO reports of increasing droughts and a drying Australia the report also predicts floods and more opportunities for hydropower.

Since, the government, for some reason, is under the impression the science is "settled" and seems unaware just how poorly understood this area of science really is, your advice to government regarding these facts is urgently required. When will you be advising them?

Regards

Graham Williamson

1. Australian Bureau of Meteorology and CSIRO, 2011. Climate Change in the Pacific: Scientific Assessment and New Research. Volume 1: Regional Overview.. Volume 2: Country Reports.
2. Australian Bureau of Meteorology and CSIRO, 2011. Climate Change in the Pacific: Scientific Assessment and New Research. Volume 1: Regional Overview. Volume 2: Country Reports/Chapter 8.
3. Amos Aikman, The Australian, 26/11/2011.

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Graham Williamson

4. Australian Bureau of Meteorology and CSIRO, 2011. Climate Change in the Pacific: Scientific Assessment and New Research. Volume 1: Regional Overview.. Volume 2: Country Reports.
5. Australian Bureau of Meteorology and CSIRO, 2011. Climate Change in the Pacific: Scientific Assessment and New Research. Volume 1: Regional Overview. Volume 2: Country Reports/Chapter 8.

6. Amos Aikman, The Australian, 26/11/2011.