

From Complex Clarity to Nuanced Misunderstanding

Peter Jacobs¹, Hunter Cutting², Stephan Lewandowsky³, Miriam O'Brien⁴, Ken Rice⁵, Bart Verheggen⁶

1. Department of Environmental Science and Policy, George Mason University, Fairfax, VA, USA
2. Climate Nexus, 3150 - 18th Street, Suite 544, PMB 309, San Francisco, CA 94110, USA
3. School of Experimental Psychology and Cabot Institute, University of Bristol, 12A Priory Road, Bristol BS8 1TU, UK
4. Mount Beauty, Victoria, Australia
5. Institute for Astronomy, University of Edinburgh, Royal Observatory, Blackford Hill, Edinburgh EH93HJ, UK
6. Amsterdam University College AUC, PO Box 94160, 1090 GD Amsterdam, The Netherlands

Corresponding Author: Ken Rice

Contact Information: wkmr@roe.ac.uk

To the Editor-

A recent Letter¹ by Hollin and Pearce suggested that, at the IPCC's AR5 WG1² press conference, the panel fell into a "certainty trap" by presenting an "incoherent" message. We argue that this conclusion is incorrect because Hollin and Pearce misunderstood key points of the panel's message and misrepresented some of the press conference statements.

Hollin and Pearce argued that in trying to meaningfully present the scientific certainty about anthropogenic global warming, IPCC speakers selected some temporally-short events to stress certainty, while dismissing other temporally-short events that brought such certainty into question. Hollin and Pearce focused on global surface temperature anomalies and the recent slowdown in surface warming (1998-2012), which they termed "the pause". This period overlapped with the hottest decade since records began (2001-2010).

The IPCC was not incoherent, and clearly distinguished between the high confidence that human activity has led to multi-decadal warming and lower confidence in the specific causes of recent short term variability (i.e. the warming slowdown, "pause" or "hiatus"). The authors quoted outgoing IPCC chair Rajendra Pachauri (transcript lines L261-262¹, Supplementary Information) as evidence of focusing on "recent and short-term climate changes" to give meaning, but omitted his preceding words: *"each of the last three decades has been successively warmer at the Earth's surface than any preceding decade since 1850."* (L258-260). Thus, as illustrated in **Figure 1**, which was shown at the press conference, the recent "hottest" decade was explicitly placed in the context of long term, climatically-relevant trends².

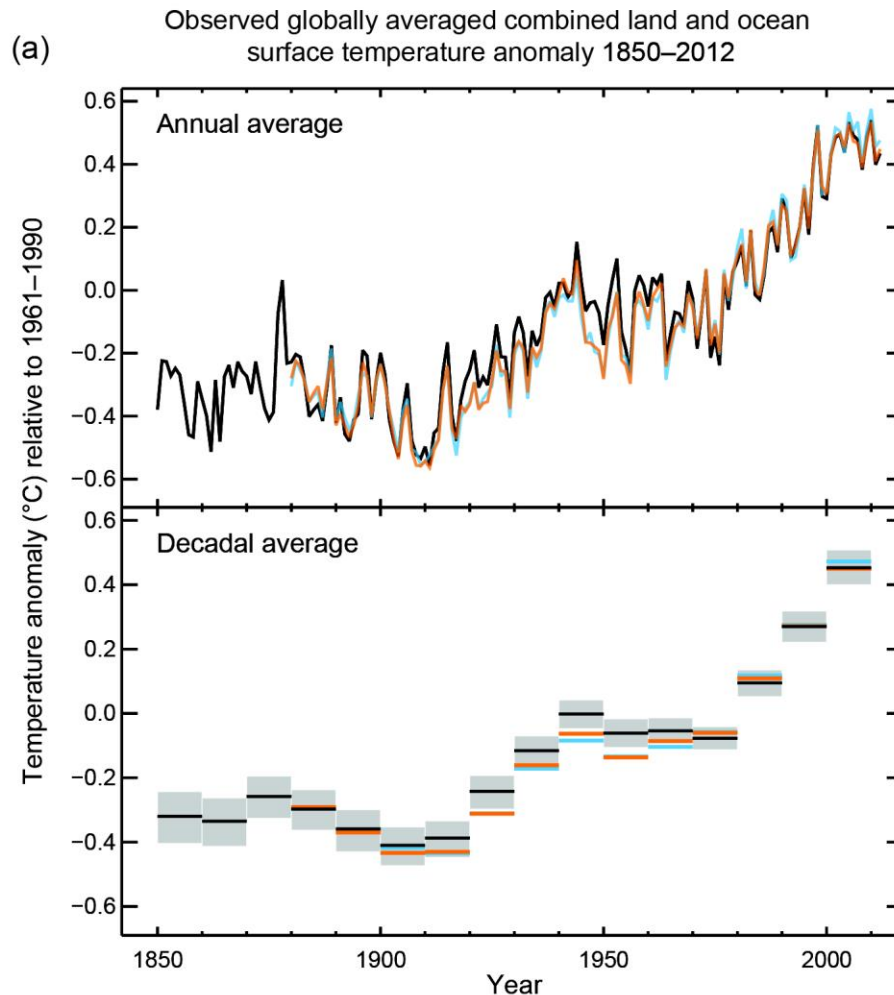


Figure 1. Figure showing the combined land and ocean surface temperature anomaly from 1850–2012, averaged annually (top panel), and averaged decadal (bottom panel). The lower panel illustrates that the discussion regarding 2001–2010 being the hottest decade is with reference to a record starting in 1850. (Credit: Figure SPM.1 on page 6 of the Summary for Policymakers (SPM)². Panel (b) omitted.)

The IPCC (correctly) characterized the recent slowdown as having less relevance to anthropogenic global warming than do multi-decade changes in surface temperature. Although of interest regarding short-term climatic variability^{3, 4} and/or how well model forcings anticipated their real world evolution⁵, the “hiatus” has little relevance when attributing surface temperature and other climatic responses to human influences^{5, 6, 7}. The temperature slowdown is reasonably well captured by those climate simulations in which the external forcings and internal variability are aligned with real world observations^{3, 4, 6, 8}.

Furthermore, Hollin and Pearce asserted the IPCC dismissed the recent slowdown in warming as scientifically irrelevant and suggested questions about it could be ignored. This is incorrect. The transcript demonstrates the IPCC did not dismiss the so-called “hiatus” as scientifically irrelevant (L1052–1055). Five of the 18 journalists asked a question about recent temperature trends; none were ignored (Supplementary Information). To justify their argument, Hollin and Pearce at one point wrote that “Stocker repeatedly pinpointed a lack of published literature as a problem”. However, far

from documenting “repeated” instances of this occurring, the authors only proffered two examples, one of which was actually not related to the slowdown at all (Supplementary Information).

In summary, Hollin and Pearce mischaracterized several fundamental aspects of the press conference, and based one of their central arguments on their own misunderstanding of the context of multi-decadal timescales. The premise of “temporally local events” was incorrectly applied by Hollin and Pearce to the IPCC’s statement about the “hottest decade”. Therefore the conclusion that the IPCC fell into a “certainty trap” does not follow.

1. Hollin G.J.S. & Pearce W. *Nature Clim. Change* **5**, 753–756 (2015).
2. IPCC Climate Change 2013: The Physical Science Basis (eds Stocker, T. F. et al.) (Cambridge Univ. Press, 2013).
3. Kosaka Y. & Xie S.-P. *Nature* **501**, 403–407 (2013)
4. Meehl, G.A., Teng H., & Arblaster J.M.. *Nature Climate Change* **4**, 898–902 (2014)
5. RealClimate 2014 <http://www.realclimate.org/index.php/archives/2014/08/ipcc-attribution-statements-redux-a-response-to-judith-curry/>
6. Schmidt G.A., Shindell D.T. & Tsigaridis K. *Nature Geoscience* **7**, 158–160 (2014)
7. Huber M. & Knutti R. *Nature Geoscience* **7**, 651–656 (2014)
8. Risbey, J. S., Lewandowsky, S., Langlais, C., Monselesan, D. P., O’Kane, T. J. & Oreskes, N. *Nature Climate Change* **4**, 835–840 (2014)