

Dear Madame, dear Sir

Thank you for considering my comments below intended to support the Independent Climate Change Email Review.

Yours sincerely,

Fortunat Joos

I am writing here based on my personal experience as a lead author of the IPCC AR4 Paleoclimate chapter and of the Technical summary of the IPCC AR4 and TAR WGI reports and as member of the drafting teams of the AR4 and TAR WGI SPM as well as an author on several papers that address climate change over the past millennium (e.g. Frank et al., Nature, 2010, Marlon et al., PNAS, 2008, Ammann et al., PNAS, 2007, Muscheler et al., QSR, 2007, Gerber et al., GBC, 2003).

What is provided below reflects only my personal view and I am not representing any institution or anybody else.

I condemn the CRU e-mail hack as a criminal act.

I view the e-mail exchange with colleagues as a very personal, casual and quick way of communication. It is the nature of personal messages that not every word and sentence is well formulated and that such text often can only be understood in the context of personal relationships. Often, e-mails are written hastily and their content is not intended for interpretation by the public.

A much better way than reading personal e-mails is to read the peer-reviewed literature and to assess the performance and the contributions of a researcher to scientific progress based on his/her publications and scientific contributions.

I encourage the panel to assess the broad set of contributions by CRU researchers to answer their questions. Relying on selectively selected e-mail messages and on comments from interested parties appears insufficient for a full and fair assessment.

I also ask the panel to recognize that main conclusions emerging from CRU research are fully supported by the results of independent researchers and by multiple lines of evidence.

1. The allegation of ignoring potential problems in deducing palaeotemperatures from tree ring data that might undermine the validity of the so-called "hockey-stick" curve.

Based on my personal experience, researchers from CRU have been very open about uncertainties in the proxy records and this allegation appears completely unjustified.

The best example for the openness of CRU researchers is the assessment on Northern Hemisphere temperature variability provided in IPCC, AR4 WGI report, section 6.6.1, page 466 to 474. Dr. K. Briffa as a lead author and Dr. T. Osborn as a contributing author of the IPCC AR4 WGI chapter Paleoclimate deserve applause for this excellent assessment of the current understanding. All the relevant problems are discussed, including the problem of 'divergence' or the scarcity of data for the early part of the millennium (e.g. figure 6.11).

The problem of divergence is apparently restricted to some northern, high-latitude regions, but is not ubiquitous even there.

As explained in the IPCC report, different sets of tree ring data, different sets of proxies (e.g. borehole temperature, ice melt series, lake diatoms, pollen data, marine shells and foraminifera) and a wide range of statistical methods and calibration methods have been applied by different international research groups.

A recent paper by Swiss researchers (Frank et al., Nature, 2010) also confirms the generally accepted interpretation of the proxy record that the recent warmth is unusual in the context of the last millennium. The according text reads:

“On the basis of all ensemble members, we find the most recent climatological period (1971–2000) was 0.70 C (median) warmer than the coldest episode of the past millennium (1601–1630), with 80% of the series yielding amplitudes between 0.52 and 0.99 C. The warmest pre-anthropogenic period (1071–1100) was 0.38 C warmer than 1601–1630, suggesting that recent anthropogenic influences have widened the last-millennium multi-decadal temperature range by 75% and that late twentieth century warmth exceeds peak temperatures over the past millennium by 0.31 C. A caveat to the latter conclusions is that more limited data do not systematically bias MWP estimates.”

2. The allegation that CRU has colluded in attempting to diminish the significance of data that might appear to conflict with the 20th century global warming hypothesis

As elaborated under point 1, researchers from CRU openly discuss uncertainties associated with proxy temperature reconstructions and this allegation appears unjustified.

3. It is alleged that proxy temperature deductions and instrumental temperature data have been improperly combined to conceal mismatch between the two data series

As mentioned under point 1, the divergence problem is well-known by the research community and it is openly discussed in the scientific literature. Thus, this allegation is irrelevant and appears unjustified.

4. It is alleged that there has been an improper bias in selecting and adjusting data so as to favour the anthropogenic global warming hypothesis and details of sites and the data adjustments have not been made adequately available

As discussed in depth in the IPCC AR4 report and in particular in the Technical Summary and in Chapter 3 (Observations: surface and atmospheric climate change) there exists multiple observational evidence that the Earth is warming and that confirm explicitly or implicitly the CRU temperature reconstruction. Data sets compiled by different groups (e.g. NCDC, GISS) confirm the evolution of global mean surface temperature as reconstructed by CRU. The recent warming trend in surface temperature is also consistent with the tropospheric warming trend revealed by satellite data and trends in ocean surface temperature and ocean heat content and the melting of alpine-type glaciers.

The allegation that there has been an improper bias in selecting and adjusting data so as to favour the anthropogenic global warming hypothesis appears therefore to be completely unjustified.

5. It is alleged that there have been improper attempts to influence the peer review system and a violation of IPCC procedures in attempting to prevent the publication of opposing ideas.

The contradictory views presented by McIntyre and McKittrick and by Soon and Baliunas are presented in the IPCC report. For example, six publications from these authors are cited in the AR4 WGI paleoclimate chapter.