



## What do the 'Climategate' hacked CRU emails tell us?

### What The Science Says:

Though some of the CRU emails can sound damning when quoted out of context, several inquiries have cleared the scientists. The Independent Climate Change Email Review put the emails into context by investigating the main allegations. It found the scientists' rigour and honesty are not in doubt, and their behaviour did not prejudice the IPCC's conclusions, though they did fail to display the proper degree of openness. The CRU emails do not negate the mountain of evidence for AGW.

### Climate Myth: Climategate CRU emails suggest conspiracy

"[T]he 1079 emails and 72 documents seem indeed evidence of a scandal involving most of the most prominent scientists pushing the man-made warming theory - a scandal that is one of the greatest in modern science. [...] emails suggesting conspiracy, collusion in exaggerating warming data, possibly illegal destruction of embarrassing information, organised resistance to disclosure, manipulation of data, private admissions of flaws in their public claims and much more." ([Andrew Bolt, Herald Sun](#))

Exhibit No. 1 of the climate conspiracy theory is a collection of emails stolen from the Climatic Research Unit (CRU) of the University of East Anglia (UEA), which appeared on the internet in November 2009.

Founded in 1972, CRU is only a small research unit with around 16 staff. CRU is best known for its work, since 1978, on a global record of instrumental temperature measurements from 1850 to the present, or CRUTEM. CRU's land surface temperatures are combined with the UK Met Office Hadley Centre's sea surface temperatures to form the global land-ocean record HadCRUT. CRU has also published reconstructions of pre-1850 temperatures based on tree rings, and CRU scientists have been involved in the Intergovernmental Panel on Climate Change (IPCC).

The 1,073 emails span 13 years of correspondence between colleagues at CRU. Much of it is mundane, but in this digital age it took only a matter of hours for contrarians to do some quote-mining. Contrarians alleged that the CRU scientists had manipulated temperature and tree ring data to support predetermined conclusions, that they had stonewalled Freedom of Information (FoI) requests for data, and that they had corrupted the peer review and IPCC processes.

The story was quickly dubbed "Climategate", and it spread rapidly from arcane contrarian blogs through conservative columnists to the mainstream media. The hyperbole was turned up to eleven. Conspiracy theorists had a field day, claiming that anyone even mentioned in the emails, or remotely connected to CRU, must also be part of a conspiracy. In this way, the Climategate conspiracy theory snowballed to include the entire field of climate science. The Climategate emails were held up as "[the final nail in the coffin of anthropogenic global warming](#)", and the media were only too happy to play up the controversy.

### The CRU scientists have been cleared

In the months that followed, there were several inquiries into the allegations resulting from the emails. When a few of the more suggestive email quotes are reeled off by pundits without much context, they can sound pretty damning. But each and every one of these inquiries [has found no fraud and no conspiracy](#).

The most comprehensive inquiry was the [Independent Climate Change Email Review](#) led by Sir Muir Russell, commissioned by UEA to examine the behaviour of the CRU scientists (but not the scientific validity of their work). It published its [final report](#) in July 2010. This inquiry was no whitewash: it examined the main allegations arising from the emails and their implications in meticulous detail. It focused on what the CRU scientists did, not what they said, investigating the evidence for and against each allegation. It interviewed CRU and UEA staff, and took 111 submissions including one from CRU itself. And it also did something the media completely failed to do: it attempted to put the actions of CRU scientists into context.

The Review went back to primary sources to see if CRU really was hiding or falsifying their data. It considered how much CRU's actions influenced the IPCC's conclusions about temperatures during the past millennium. It commissioned a paper by Dr Richard Horton, editor of *The Lancet*, on the context of scientific peer review. It asked IPCC Review Editors how much influence individuals could wield on writing groups. And it reviewed the university's FOI processes and CRU's compliance with them. Many of these are things any journalist could have done relatively easily, but few ever bothered to do.

The Review also commented on the broader context of science in the 21st century. To paraphrase from Chapter 5: the emergence of the blogosphere requires significantly more openness from scientists. However, providing the details necessary to validate large datasets can be difficult and time-consuming, and how FOI laws apply to research is still an evolving area. Meanwhile, the public needs to understand that science cannot and does not produce absolutely precise answers. Though the uncertainties may become smaller and better constrained over time, uncertainty in science is a fact of life which policymakers have to deal with. The chapter concludes: "the Review would urge all scientists to learn to communicate their work in ways that the public can access and understand".

The Review points out the well-known psychological phenomenon that email is less formal than other forms of communication: "Extreme forms of language are frequently applied to quite normal situations by people who would never use it in other communication channels." The CRU scientists assumed their emails to be private, so they used "slang, jargon and acronyms" which would have been more fully explained had they been talking to the public. And although some emails suggest CRU went out of their way to make life difficult for their critics, there are others which suggest they were bending over backwards to be honest. Therefore the Review found "the e-mails cannot always be relied upon as evidence of what actually occurred, nor indicative of actual behaviour that is extreme, exceptional or unprofessional." [section 4.3]

So when put into the proper context, what do these emails actually reveal about the behaviour of the CRU scientists? The report concluded (its emphasis):

Climate science is a matter of such global importance, that the highest standards of honesty, rigour, and openness are needed in its conduct. On the specific allegations made against the behaviour of CRU scientists, **we find that their rigour and honesty as scientists are not in doubt.**

In addition, we do not find that their behaviour has prejudiced the balance of advice given to policy makers. In particular, **we did not find any evidence of behaviour that might undermine the conclusions of the IPCC assessments.**

**But we do find that there has been a consistent pattern of failing to display the proper degree of openness**, both on the part of the CRU scientists and on the part of the UEA, who failed to recognize not only the significance of statutory requirements but also the risk to the reputation of the University and indeed, to the credibility of UK climate science. [1.3]

These general findings are more or less consistent across the various allegations the Review investigated. Its specific findings are summarized in the following rebuttals: "[Did CRU tamper with temperature data?](#)", "[What does Mike's Nature trick to 'hide the decline' mean?](#)", "[Climategate and the peer-review process](#)", "[Were skeptic scientists kept out of the IPCC?](#)", and "[Climategate and the Freedom of Information \(FOI\) requests](#)".

## The science is unchanged by Climategate

The argument that Climategate reveals an international climate science conspiracy is not really a very skeptical one. It is skeptical in the weak sense of questioning authority, but it

stops there. Unlike true skepticism, it doesn't go on to objectively examine all the evidence and draw a conclusion based on that evidence. Instead, it cherry-picks suggestive emails, seeing everything as incontrovertible evidence of a conspiracy, and concludes all of mainstream climate science is guilty by association. This is not skepticism; this is conspiracy theory.

In reality, Climategate has not thrown any legitimate doubt on CRU's results, let alone the conclusions of the entire climate science community. The entire work of CRU comprises [only a small part of the evidence for AGW](#). There are all sorts of lines of [evidence for global warming](#), and for [a human influence on climate](#), which in no way depend on the behaviour of the CRU scientists. Global warming has been observed not just on land but also over the oceans and in the troposphere, as well as being confirmed by many other indicators such as ocean heat content, humidity, sea level, glaciers, and Arctic sea ice. And while the hockey stick tells us that [humans have caused a profound disturbance to our climate system](#), we don't need it to know that humans are causing global warming. The pattern of warming we observe is the same as that long predicted for greenhouse warming: the stratosphere is cooling, nights have warmed faster than days, and winters faster than summers.

But this reality doesn't fit into the narrative that the contrarians would like to tell: that AGW is a house of cards that is falling down. It is very difficult to attack all of these diverse lines of evidence for global warming. Instead they tend to focus on some of the better publicized ones and try to associate them with a few individuals, making a much easier target. Yet while contrarians have been nosing around in scientists' emails, the actual science has, if anything, become more concerning. Many major studies during [2009](#) and [2010](#) found things may be worse than previously thought.

Far from exposing a global warming fraud, "Climategate" merely exposed the depths to which contrarians are willing to sink in their attempts to manufacture doubt about AGW. They cannot win the argument on scientific grounds, so now they are trying to discredit researchers themselves. Climategate was a fake scandal from beginning to end, and the media swallowed it hook, line, and sinker. The real scandal is the attacks on climate science which have done untold damage to the reputation of the scientists involved, public trust in science, and the prospects of mitigating future warming.

Advanced rebuttal written by James Wight

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### **Update July 2015:**

Here is a related lecture-video from [Denial101x - Making Sense of Climate Science Denial](#)

Expert interview with [Kevin Trenberth](#)

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