



House of Commons
Science and Technology
Committee

**The Reviews into the
University of East
Anglia's Climatic
Research Unit's E-
mails: Government
Response to the
Committee's First
Report of Session
2010–12**

**Second Special Report of
Session 2010–12**

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The Science and Technology Committee

The Science and Technology Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Government Office for Science and associated public bodies.

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The Reports of the Committee, the formal minutes relating to that report, oral evidence taken and some or all written evidence are available in printed volume(s).

Additional written evidence may be published on the internet only.

Committee staff

The current staff of the Committee are: Glenn McKee (Clerk); Ed Beale (Second Clerk); Farrah Bhatti (Committee Specialist); Xameerah Malik (Committee Specialist); Andy Boyd (Senior Committee Assistant); Julie Storey (Committee Assistant); Pam Morris (Committee Assistant); and Becky Jones (Media Officer).

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Second Special Report

On 25 January 2011 the Science and Technology Committee published its First Report of Session 2010–11,¹ *The Reviews into the University of East Anglia's Climatic Research Unit's E-mails* [HC 444]. On 5 April 2011 the Committee received a memorandum from the Government which contained a response to the Report. The memorandum is published as an appendix to this Report.

Appendix: Government response

Following the unauthorised release of data and emails from the University of East Anglia's (UEA) Climatic Research Unit (CRU) in November 2009, and allegations made against CRU scientists of manipulation and deletion of data and emails in order to provide support for warming temperature trends, UEA set up two independent inquiries: the Independent Climate Change Email Review (ICCER), chaired by Sir Muir Russell; and the Scientific Appraisal Panel (SAP), chaired by Lord Oxburgh.

The previous Science and Technology Committee also conducted an inquiry into the release of the CRU emails but time constraints at the end of the last Parliament meant it was completed before the SAP and ICCER had reported. In its first report of session 2010–11 the House of Commons Science and Technology Committee has focussed on how these two independent reviews fulfilled their respective mandates.

The Government is grateful for the time the Committee has devoted to considering these reviews.

It is a primary concern to the Government that the evidence base for policies is robust. Where this evidence base is questioned, it is right that allegations are properly assessed and scrutinised. After two independent reviews, and two reviews by the Science and Technology Committee, we find no evidence to question the scientific basis of human influence on the climate.

We note that this report from the Committee makes recommendations aimed at strengthening the transparency of scientific research, and that the principle of transparency is one to which the Government is fundamentally committed.

This response has been prepared by the Government Office for Science (GO-Science), with input from the Department for Business, Innovation and Skills (BIS), the Ministry of Justice (MOJ), the Department of Energy and Climate Change (DECC) and the Department for the Environment, Food and Rural Affairs (DEFRA). The Committee's recommendations are shown in bold and the paragraph references at the end of each recommendation correspond with those in the Committee's report. The Government's response is given beneath each recommendation, or group of recommendations.

¹ Since the report was published it has been established that the session is expected to continue until 2012.

The Scientific Appraisal Panel (SAP)

It is our view that the most reasonable interpretation of the UEA press notice of 11 February 2010 and the Vice-Chancellor's statement on 1 March 2010 was that the Scientific Assessment Panel would examine the quality of the science as well as the integrity. In the event, Lord Oxburgh and his colleagues on the Panel carried out a narrower inquiry that focussed on the Climatic Research Unit's methodologies and the integrity of the research. Had the scope and purpose of the SAP been made clear from the beginning of February it would have avoided much confusion and the inevitable allegation of manipulation. (Paragraph 23)

We accept that there was no need to amend the terms of reference of the Independent Climate Change E-mails Review, as recommendations on best practice were considered to be included within the remit of the review. (Paragraph 26)

The disparity in length between the SAP and ICCER reports is striking. When compared to the ICCER, the SAP report—a mere five pages—reads like an executive summary, with none of the detail of the ICCER. From Lord Oxburgh's evidence to us, the report does not appear to explain the detailed work carried out by the SAP. That in itself does not invalidate the SAP report but it does foster an impression that it was not as thorough as the ICCER and was produced quickly in an attempt to be helpful to UEA. (Paragraph 33)

In the interest of openness and transparency, supporting documents including the working documents of Professor Kelly and others on the Panel should have been made publicly available alongside the report and should now be made available. Unfortunately, Professor Kelly's comments—which have been published in isolation online—can now be read out of context. Had these been published alongside the comments of the other Panel members with an outline of roundtable discussions we consider that this would not have been a problem. The importance of Professor Kelly's work is that it clears CRU of deliberately falsifying their figures but, as the SAP report put it, “the potential for misleading results arising from selection bias is very great in this area”. (Paragraph 39)

The ICCER and SAP were carried out independently of Government and Government had no role in informing how these reviews were carried out. However, as one of a number of Parties with an interest in the findings of the reviews, we welcome the interest that the Science and Technology Committee has taken in establishing whether the reviews were carried out in a robust way. The findings of the Committee give us confidence in our judgement that the conclusions are well thought through and that no events at CRU undermine the scientific consensus on human-induced climate change. The recommendations of the reviews are also useful for advising future research policies and practices.

The Government notes the recommendations of the Committee in relation to the SAP, noting that it has not questioned the validity of its findings, but rather suggested that the manner in which the Panel made information available, including in relation to the scope of its work, had allowed some to question its approach. We consider that this highlights the

importance of transparency in communication—both to avoid misinterpretation and to guard against deliberate misrepresentation.

Oral hearings

Our preference would have been, like our predecessors, for evidence to have been taken in public. We accept, however, that Sir Muir's reasons for not doing this were reasonable. He chose to make detailed references of the scientific information relevant to what CRU scientists had actually done, in order to ensure that there was a robust written record. We do not consider, however, that this process would have been hampered by conducting the interviews in public. (Paragraph 42)

The Government recognises that a more public approach to evidence gathering may have given greater confidence to some in the transparency of the process, but notes that the Committee accepted Sir Muir Russell's reasons for adopting a different approach.

Selection of publications

In our view, the debate about the 11 publications examined by the Scientific Assessment Panel (SAP) is frustrating. While there is no doubt that the papers chosen were central to CRU's work and went to the heart of the criticisms directed at CRU, the allegations that certain areas of climate science such as key multiproxy temperature reconstructions were purposely overlooked could have been disregarded if the SAP had set out its process of selection in a more transparent manner. (Paragraph 49)

We note the Committee's conclusion that the selection of papers examined by the SAP was representative of the work of CRU in all areas in which allegations had been made. We note that once again the primary concern of the Committee related to transparency and communication—in this case with regard to the process for selecting the sample of papers considered by the SAP—rather than any conscious decision to purposely overlook certain areas of work.

Publication arrangements

While we accept that it was not unreasonable for ICCER to inform UEA of the contents of its report in advance of publication, the fact is that this was open to misinterpretation. (Paragraph 51)

The Government notes that providing advance copies of reports to stakeholders is common practice in public and parliamentary life.

Disclosure of data and methodologies

The disclosure of raw data and sufficient details of the computer programmes is paramount in encouraging people to question science in the conventional way, challenging existing work, enabling validation of it and coming forward with new hypotheses. We welcome the ICCER's recommendation to UEA on the provision of a formal metadata repository, and are pleased that CRU is investing in posts to archive

their data efficiently. We hope that no obstacles, financial or otherwise, will get in the way of CRU pursuing this. (Paragraph 58)

Lord Oxburgh said that CRU was not able to make accurate reconstructions in every case, particularly of old material. Professor Davies from UEA confirmed this but said CRU scientists would be able to do this given a number of weeks. This is precisely the sort of work we would have expected the Scientific Assessment Panel to conduct—had it been less concerned about rushing to publish its report—during its inquiry into methodologies and the integrity of research at CRU. (Paragraph 61)

We consider that data disclosed in publications should be accompanied by sufficient detail of computer programmes, specific methodology or techniques used to analyse the data, such that another expert could repeat the work. Providing the means for others to question science in this way will help guard against not only scientific fraud but also the spread of misinformation and unsustainable allegations. (Paragraph 66)

The Government agrees that research findings should be fully replicable and that publicly-funded research data should be readily available to others, to both allow them to replicate analysis and to develop their own ideas. The archiving of data and metadata with long-term value is of fundamental importance in this regard.

There are however ethical, legal and commercial constraints which may preclude data-sharing which must be considered, to which the Government is giving attention to in its broader work on transparency. A set of common data access principles is being developed across the Research Councils: these principles start with a presumption in favour of openness and transparency, whilst ensuring appropriate protection and safeguards are in place to protect commercially sensitive and personal data.

Peer review

The conclusions reached by the Independent Climate Change E-mails Review (ICCER) are in line with our predecessor Committee's findings that "the evidence they saw did not suggest that Professor Jones was trying to subvert the peer review process and that academics should not be criticised for making informal comments on academic papers". We stand by this conclusion and are satisfied with the detailed analysis of the allegations by the ICCER. (Paragraph 77)

The Government notes the Committee's conclusion that there was no evidence of attempts to subvert the peer review process, and agrees that academics should not be criticised for commenting informally on academic papers, noting that constructive criticism and challenge is fundamental to ensuring a robust scientific approach.

Freedom of Information

We are concerned that the Independent Climate Change E-mails Review did not fully investigate the serious allegation relating to the deletion of e-mails. We find it unsatisfactory that we are left with a verbal reassurance from the Vice-Chancellor that the e-mails still exist. On the basis of the ICO's announcement made on 7 July 2010, it is reasonable to conclude that there was a breach of EIR by a failure to provide a

response within 20 working days. On the allegation that e-mails were deleted to frustrate requests for information, a firm conclusion has proved elusive. UEA have accepted that there were weaknesses in their system, and in pockets of their culture, for dealing with requests for information. We are pleased that they are working towards rectifying this. (Paragraph 89)

The broader confusion about how FoI legislation should be applied to scientific research must be resolved. The Information Commissioner's Office has made some progress, but this should now be pursued as a matter of urgency. The Government Chief Scientific Adviser will also be looking at this issue. We regard this matter as sufficiently serious that we want to see it resolved. We hope the Information Commissioner's Office will provide clear guidance on the application of FoI to scientific research by the start of the new academic year in September 2011. (Paragraph 93)

Section 77 of the Freedom of Information Act (FOI Act) and Regulation 19 of the Environmental Information Regulations (EIR) make it an offence intentionally to prevent the disclosure of requested information. Under the current legislative provisions prosecutions for such offences must be brought within six months of the offence occurring.

The Government will continue to work with the Information Commissioner's Office (ICO) to determine the extent that alleged offences, under section 77 of the FOI Act and Regulation 19 of the EIR, have not been prosecuted as a result of the current provisions.

The ICO are also working with the Higher Education sector, the Government Chief Scientific Adviser and the Royal Society to consider what further guidance should be developed on scientific research and FOI. The ICO aims to produce new guidance by September as recommended by the Committee, and will report back to the Committee on progress.

We note and welcome that since the Committee took evidence UEA have signed an ICO Undertaking to improve certain aspects of practice related to FOI/EIR compliance.

Moving forward at UEA

The disclosure of data from the Climatic Research Unit has been a traumatic and challenging experience for all involved and to the wider world of science. Much rests on the accuracy and integrity of climate science. This is an area where strong and opposing views are held. It is, however, important to bear in mind the considered view of the Government Chief Scientific Adviser, Professor Sir John Beddington, that "the general issues on overall global temperature, on sea level and so on, are all pretty unequivocal". While we do have some reservations about the way in which UEA operated, the SAP review and the ICCER set out clear and sensible recommendations. In our view it is time to make the changes and improvements recommended and with greater openness and transparency move on. (Paragraph 98)

As the Committee notes, much rests on the accuracy and integrity of climate science. It is vital that the wider public and Government can take confidence in the evidence that underpins public policies.

Evidence from multiple disciplines and sources strongly indicates that climate change, driven by human activities, poses real risks for our future. This evidence is comprehensively captured in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), and in more recent analyses including from the US National Research Council of the National Academies. It is also clear from an almost continuous body of publications in the academic literature that the evidence for human induced climate change continues to grow and that the perceptions of future climate risk are not diminishing.

The Government welcomes the scrutiny that has been provided by two independent reviews, plus two sessions of the Science and Technology Committee, to investigate the allegations arising from the unauthorised release of data at the University of East Anglia.

As well as establishing that events at the University do not undermine the scientific basis of human-driven climate change, the reviews have made a number of useful recommendations to improve transparency in climate science.

Such recommendations will continue to strengthen climate science. Important work remains better to understand the risks of climate change, and how to manage them. We welcome—and agree with—the finding of the Committee that it is time ‘with greater openness and transparency, to move on’.