From: Sent: Trevor Davies (VCO) 06 February 2010 22:07

To: Subject:

Edward Acton (VCO); Brian Summers (REG) FW: FYI - tomorrow's Sunday Times main spread

From: Neil Wallis [neil@neilwallis.co.uk]

Sent: 06 February 2010 21:43

To: Davies Trevor Prof (ENV); Jones Philip Prof (ENV); Preece Alan Mr (MAC)

Cc: Sam BOWEN; Alan Edwards; Neil Wallis

Subject: {Spam?} Re: FYI - tomorrow's Sunday Times main spread

SEE BELOW

From The Sunday Times >February 7, 2010

the leak was bad. Then came the death threats

Richard Girling

R.OMMEND?

PHOTGRAPHS of Professor Phil Jones show a handsome, smiling, confident-looking man. Not chubby exactly, but in blooming good health. The man who meets me at the University of East Anglia (UEA) looks grey-skinned and gaunt, as if he has been kept in prison.

In a way, he has. Since November last year he has been a prisoner of public opprobrium and a target of such vilification that was he was almost persuaded to comply with the wishes of those who wanted him dead.

In bare outline, the story of the Climatic Research Unit emails — "Climategate" — is well known.

Unidentified hackers broke into the UEA website and made off with more than a thousand emails, plus some data and program files dating back over 13 years. The thieves' eureka moment came when they found messages from Jones, the unit's director, and others apparently encouraging climate scientists to refuse freedom of information (FoI) requests from known climate sceptics, and even to destroy data rather than surrender them to anyone they feared might misuse them.

ACKGROUND

The IPCC's Synthesis Report (See section 3.3.2)

International Institute for Sustainable Development - report on how climate change might affect crop yields Climate change speech by Ban Ki-Moon, UN secretary-general

RELATED LINKS

Climate scandal professor considered suicide

Scientist says UN panel is losing credibility

At the worst posible time, in the days immediately before the Copenhagen climate summit in December, it enabled sceptics across the globe to claim that climate science was fatally flawed and its practitioners a shifty gang who twisted the facts to suit their agenda and shut out anyone who disagreed with them.

Jones insists that is not the way it was, but concedes it was the way it may have looked. He now accepts that he did not treat the FoI requests as seriously as he should have done. "I regret that I did not deal with them in the right way," he told The Sunday Times. "In a way, I misjudged the situation."

But he pleads provocation. Last year in July alone the unit received 60 Fol requests from across the world. With a staff of only 13 to cope with them, the demands were accumulating faster than they could be dealt with. "According to the rules," says Jones, "you have to do 18 hours' work on each one before you're allowed to turn it down." It meant that the scientists would have had a lot of their time diverted from research.

A further irritation was that most of the data was available online, making the Fol requests, in Jones's view, needless and a vexatious waste of his time. In the circumstances, he says, he thought it reasonable to refer the applicants to

A further irritation was that most of the data was available online, making the Fol requests, in Jones's view, needless and a vexatious waste of his time. In the circumstances, he says, he thought it reasonable to refer the applicants to the website of the Historical Climatology Network in the US.

He also suspected that the CRU was the target of a co-ordinated attempt to interfere with its work — a suspicion that hardened into certainty when, over a matter of days, it received 40 similar FoI requests. Each applicant asked for data from five different countries, 200 in all, which would have been a daunting task even for someone with nothing else to do. It was clear to Jones that the attack originated from an old adversary, the sceptical website Climate Audit, run by Steve Mointyre, a former minerals prospector and arch climate sceptic.

"We were clearly being targeted," says Jones. "Only 22% of the Fol enquiries were identifiably from within the UK, 39% were from abroad and 39% were untraceable." What irked him was that the foreign applicants would all have had sources closer to hand in their own countries.

"I think they just wanted to waste our time," he says. "They wanted to slow us down."

It was pure irritation, he says, that provoked him and others to write the notorious emails apparently conspiring to destroy or withhold data. "It was just frustration. I thought the requests were just distractions. It was taking us away from our day lobs. It was written in anger."

"It he insists that no data were destroyed. "We have no data to delete, it comes to us from institutions around the world.

a interpret data. We don't create or collect it. It's all available from other sources."

If the leak itself was bad, the aftermath was the stuff of nightmares. Even now, weeks later, Jones seems rigid with shock. "There were death threats," he says. "People said I should go and kill myself. They said they knew where I lived." Two more death threats came last week after the deputy information commissioner delivered his verdict, making more work for Norfolk police, who are already investigating the theft of the emails.

The effect on Jones was devastating. The worldwide outcry plunged him into the snakepit of international politics. It was, he agrees, *a David Kelly moment*.

"I did think about it, yes. About suicide. I thought about it several times, but I think I've got past that stage now." With the support of his family, and particularly the love of his five-year-old granddaughter, he began to look forward again. He is still unwell, getting through the day on beta-blockers and the night on sleeping pills, and he has lost a stone in weight. But at last there is optimism.

Until the inquiry is over, he will stand aside from his directorship of the CRU. On the question of the science, however, he remains bristlingly defiant. He may have tripped up over the FoI requests, but nobody has laid a glove on the science. To prove his point, he spreads the table with graphs, tracing the outlines with his fingertip. He shows how the warming trend plotted by the CRU precisely matches the plots from two independent sources in America. "There, you see!" The three coloured lines precisely overlay each other, proof positive of scientific probity.

am obviously going to be much more careful about my emails in future. I will write every email as if it is for publication. But I stand 100% behind the science. I did not manipulate or fabricate any data, and I look forward to proving that to the Sir Muir Russell inquiry [the UEA's independent review into allegations against the unit]."

Then, he believes, at the age of 57 he will be ready to resume his career and get on quietly and invisibly with what he does best. His hope for the future? "I wish people would read my scientific papers rather than my emails."

Neil Wallis [neil@neilwallis.co.uk]

Sent:

07 February 2010 12:06

To: Subject:

Edward Acton (VCO) Re: Confidential. Sunday 7

Thanks.

Lets hope we can continue!

Best, Neil

On 07/02/2010 11:54, "Acton Edward Prof (VCO)" < E.Acton@uea.ac.uk > wrote:

Dear Neil

I am delighted by the amount achieved. Now we must see how the coverage unfolds. But it seems to me you and Sam have helped us maximise the chances of that elusive line in the sand. Warmest thanks for everything thus far...

Best wishes

Edward

Neil Wallis

Neil Wallis Media Limited 07710 664144 neil@neilwallis.co.uk ____

From: Sent: To:

Subject:

Trevor Davies (VCO) 06 February 2010 18:58

Brian Summers (REG); Edward Acton (VCO)

FW: Phil Jones media inquiries

Fyl

From: Neil Wallis [neil@neilwallis.co.uk]

Sent: 06 February 2010 18:48

To: Preece Alan Mr (MAC); Davies Trevor Prof (ENV)
Cc: Jones Philip Prof (ENV); Sam BOWEN; Alan Edwards

Subject: Phil Jones media inquiries

Its probably worth reiterating that we assume the UEA Press Office will continue fielding all calls regarding Phil Jones, and will continue to be the public interface with the media.

We assume there will be many requests for follow-up interviews following tomorrow's Sunday Times publication - which we have agreed will almost certainly be denied at this stage – that the UEA Press Office will deal with.

If there is anything which, despite that guiding principle of no further interviews, is deemed to require urgent further reconsideration then the UEA Press Office should feel free to contact the Outside team at any time.

Hope that makes sense,

Best Regards

Neil .

Neil Wallis

Neil Wallis Media Limited 07710 664144 neil@neilwallis.co.uk

Sent:

Cc:

22 February 2010 17:28

To:

Acton Edward Prof (VCO); Davies Trevor Prof (ENV); Jones Philip Prof (ENV); Osborn

Timothy Dr (ENV); Liss Peter Prof (ENV); Neil Wallis

Preece Alan Mr (MAC); Ogden Annie Ms (MAC); Dunford Simon Mr (MAC); Williams Lisa Ms

Subject:

Arrangements for Tomorrow + Thursday

Dear All,

I can confirm that the following is the plan for:

Tuesday 23 February

1.30 - 5.00 p.m.

ward

Phil

Neil

Sam

Trevor

Tim Osborn

Alan/Annie/Simon

Lisa

All meet in Edward's office in VCO

Thursday 25 February

9.00 until 10:00 a.m.

Dry run for Edward and Phil with Trevor, Alan, Peter Liss, Tim Osborn and Lisa

00 a.m. until 1.00 p.m.

_uward with Neil, Sam and Trevor

12.00 until 3.00 p.m.

Phil with Neil, Sam and Trevor and possibly Edward(?)

Committee Room 2 - sandwich lunch will be organised

Neil: If there are any changes to the above programme after tomorrow's meeting, just let me know.

Best wishes,



Sam BOWEN [sam@sbpublicity.co.uk]

Sent: To: 22 February 2010 17:49 . Edward Acton (VCO)

Subject:

Re: Select Committee prep

Thanks Edward - looking forward to seeing you again.

Best, SAM

On 22 Feb 2010, at 17:42, Acton Edward Prof (VCO) wrote:

Dear Sam

This sounds a very good plan. Copying to

to see we can arrange things as you suggest.

Best

Edward

From: Sam BOWEN [mailto:sam@sbpublicity.co.uk]

Sent: Monday, February 22, 2010 5:15 PM

To: Preece Alan Mr (MAC)

Cc: Neil Wallis; Acton Edward Prof (VCO); Davles Trevor Prof (ENV); Williams Lisa Ms (VCO); Ogden Annie Ms

(MAC); Dunford Simon Mr (MAC); Jones Philip Prof (ENV)

Subject: Re: Select Committee prep

Hi Alan

Thanks for these timings. One question:

As I believe you know, will be coming with us on Thursday to look at 'communications impact' (i.e. body language, confidence, approach etc) - this is more about style over content. works with a number of CEOs prior to AGMs to enhance their approach.

Ideally, he needs 2 hours individually with Edward and Phil, to film them at the beginning and end of his sessions and help their technique in between.

Could we look at the following timings:

10-12: Edward

12-2 - Phil

2-3 Both together as a mock Select Committee (questions from Neil, myself and the UEA team)

How does that sound?

Many thanks, SAM

On 22 Feb 2010, at 13:29, Preece Alan Mr (MAC) wrote:

Dear Neil

You are going to call me back after your other meeting but this is a summary of what we now have schuedule following the thoughts you suggested earlier,

Tuesday

1.30pm to 5pm

We have Edward (and hope to have Phil) throughout this time for a review of the questions and some sorting around who deals with what.

From our end I will attend as will Anne Ogden and Simon Dunford. We anticipate that Trevor will be there. Lisa will also attend.

Thursday

9am-10am

We will have a mock Committee session with a small number of internal colleagues with both Phil and Edward. The intention is then to let you do the intensive work with Edward from 10am to 12noon when Phil will re-join and then have Phil and Edward together from 12noon-1pm and then Phil only for an intensive session from 1pm to 3pm. In attendance from 10-3 will be - depending on diaries Trevor Davies, Tim Osborne, me and Lisa.

This schedule squeezes more time for the activity and also gives one-to-one intensive tuition time for Phil and Edward on the Thursday. Hope that is helpful.

Regards

Alan

Alan Preece
Director of Marketing and Communications
University of East Anglia
01603 593015

3rd for facilities and 5th overall in the Times Higher Student Experience Survey 2010

2009 "What Uni" Student Choice Award winner and 3rd amongst mainstream English universities in the National Student Survey

World top 200, European top 100, UK top 30 (Times League Table 2010)

Norwich: fourth highest cited UK city for science, thanks to the University and our Norwich Research Park partners.

Neil Wallis [neil@neilwallis.co.uk]

Sent:

22 February 2010 18:53

To:

Preece Alan Mr (MAC); Edward Acton (VCO); Jones Philip Prof (ENV); Annie Ogden

(ARM); Trevor Davies (VOO); Sam BOWEN

Cc:

Osborn Timothy Dr (ENV)

Subject:

Re: Select Committée questions

Folks,

This is fine (indeed useful) for Edward and Phil to peruse and get a feel of the ways in which questions can be asked, but there are now simply so many of them that it would be impossible for either person to answer if we had the rest of the week to do nothing else.

It will be particularly impossible to get those answers, analyse them, then reconsider in the time available. What we need to do is to distil these into priority questions and concentrate on those, in the process working out our core positions and messages are.

Best,

Neil

Neil Wallis

Neil Wallis Media Limited 07710 664144 neil@neilwallis.co.uk

On 22/02/2010 18:07, "Preece Alan Mr (MAC)" < A.Preece@uea.ac.uk > wrote:

Dear All

Here is a very long list of questions - broadly grouped by theme - which includes Edward's latest additions. We can do more work on them tomorrow.

Regards

Alan

Alan Preece Director of Marketing and Communications Jniversity of East Anglia 01603 593015

3rd for facilities and 5th overall in the Times Higher Student Experience Survey 2010

2009 "What Uni" Student Choice Award winner and 3rd amongst mainstream English universities in the National Student Survey

World top 200, European top 100, UK top 30 (Times League Table 2010)

Norwich: fourth highest cited UK city for science, thanks to the University and our Norwich Research Park partners.



From: Sent:

To:

neiljwallis@aol.com 23 February 2010 19:43 Edward Acton (VCO); Trevor Davies (VCO) Times p24

Subject:

Edward, piece right after your own heart by David Aaronovitch in Times today.

Best,

Neil

Sent from my BlackBerry® wireless device

Annie Ogden (ARM) 24 February 2010 18:24

Sent: To:

Simon Dunford (ARM); Preece Alan Mr (MAC);

Cc: Subject:

Attachments:

nell@nellwallis.co.uk; Trevor Davies (VCO); Edward Acton (VCO); Lisa Williams (VCO)

sam.bowen@outslde-org.co.uk

FW: UEA submission - EMBARGOED TO 09.00, THURS 25 FEB

Memorandum from UEA 24 2 10.doc; Memorandum from UEA Appendix.doc

Dear all,

This has gone to the . I will send first thing in the morning to Please note that text has been amended slightly.

Best, Annie

Annie Ogden, Head of Communications, University of East Anglia, Norwich, NR4 7TJ. Tel:+44 (0)1603 592764

www.uea.ac.uk/comm

----Original Message----From: Ogden Annie Ms (MAC)

Sent: Wednesday, February 24, 2010 6:19 PM

To:

Subject: DEA submission - EMBARGOED TO 09.00, THURS 25 FEB

Dear

might choose.

I understand that you are expecting to hear from me, following a conversation between Neil Wallis and

As you will be aware, the University of East Anglia's responses to the Commons Science and Technology Select Committee will be published tomorrow in advance of Monday's hearing into the impact of the email hacking at the Climatic Research Unit. Please find the document attached and note that all of this information is STRICTLY EMBARGOED TO 09.00, THURS 25 FEBRUARY.

- I just wanted to draw your attention to a few of the points made by the University in its submission:
- 1. FOI: The Information Commissioner has not found the University to be in breach of the Freedom of Information Act. The ICO has confirmed by letter to the University that no breach of the law has been established, that the ICO's misconstrued comments to the press were based on prima facie evidence and that the FOI request in question related to a private email exchange, not raw data.
- 2. DATA in CRU: The Climatic Research Unit strongly rejects accusations that it has lost or manipulated any data. The primary station data still exist in the World Weather Records, in National Meteorological Society Yearbooks or other sources including the Global Historical Climate Network. CRU has asked permission from National Meteorological Services to make their data available; some have refused. CRU responded to FOIA requests for primary data by pointing out that data from approximately 90% of the stations in the CRU dataset are available from other sources, particularly GHCN. Using such sources, it has been possible, for a number of years, for anyone to construct their own global land temperature record, using whichever combination of stations they

3. OTHER DATA SETS: Two other independent data sets exist in the United States: one is held by the Goddard Institute for Space Studies, while the Global Historical Climate Network is held by the National Climatic Data. The three sets have some common sources of primary data, but are completely independent in terms of adjustments and methodologies. There is strong agreement between the analysis of the three sets.

No one will be available for interview before the Select Committee hearing, but you are welcome to quote our Vice-Chancellor, Prof Edward Acton's closing comments in the document or use the following statement from him:

"We founded the Climatic Research Unit in 1972 and are proud of this University's reputation as a world leader in geosciences and, in particular, of our pioneering role in advancing society's ability to understand the world's changing climate.

"As the head of this institution, I am fully committed to putting right anything that is found to be amiss by the independent reviews that I have instigated. Meanwhile, I believe that this submission addresses the concerns that the Select Committee has raised and we are looking forward to putting our case to them."

Thanks for your help. Best, Annie

Annie Ogden, Head of Communications, University of East Anglia, Norwich, NR4 7TJ.

Tel:+44 (0)1603 592764

www.uea.ac.uk/comm

Memorandum submitted by the University of East Anglia

1. Introduction

1.1 This memorandum is submitted by the Vice-Chancellor, Professor Edward Acton, the University's principal academic and administrative officer, with additional comment provided, where indicated, by the University's Climatic Research Unit (CRU).

1.2 Freedom and Integrity of scientific research

The University of East Anglia (UEA) was founded in 1963. For over forty-five years it has sought to identify fruitful fields for research and study, notably in the sciences, and to provide a free environment in which new and challenging research can flourish. It is now recognised as a world leader in several branches of the geophysical sciences, and it is understandably proud of that reputation.

- 1.3 Like all British universities, it has a set of policies, regulations and codes of good conduct which UEA's researchers are required to follow. At the heart of these is the requirement to maintain "honesty, openness, accountability and integrity." Plagiarism, deception or the fabrication or falsification of results are regarded as serious disciplinary offences, and are a betrayal of the life of science.
- 1.4 When assessing the quality of scientific research work, UEA relies first and foremost on critical evaluation by the international network of specialists working in each field. This "peer review" is the keystone for maintaining the integrity of scientific research: the scrutiny, probing, questioning and evaluation of the work of each scientist by other experts in the field. It is through peer review that scientific reputations and esteem are established, that competition for research funding is determined, and that editors decide which work to publish and which to reject.

1.5 The Climatic Research Unit

Four decades ago, UEA identified climate as an important field of study but one in which the data and methods used were primitive. In 1972 the University founded the Climatic Research Unit (CRU) which has played a pioneering role in advancing human ability to understand the world's changing climate. It is part of a department with an international reputation,

- 1.6 CRU's contribution has included the compilation of a global land temperature record and the development of increasingly sophisticated methods by which to represent the average temperature of the globe and changes in that average over time. The evidence has steadily mounted of a marked increase in average global temperatures. This has given CRU's work momentous political and social significance.
- 1.7 We are well aware that research addressing issues with such profound implications for the human species is liable to trigger fierce debate. Moreover, we believe that such debate is a crucial and necessary part of the role of science in society. Currently there are deep concerns lest scientific analysis has exaggerated the rise in global temperature. But equally, there are fears that the rise may be underplayed, or dismissed altogether, by powerful commercial or political interests.

1.8 In the midst of this vital debate, the University's role remains unchanged. It is to pursue the best scientific research and data, to ensure that the research is pursued in conformity with our codes of good conduct, and that its quality is continuously tested and evaluated by peer review.

1.9 Independent Review

((

Given the high profile and importance of this research, following the theft of CRU emails in November and allegations that some pieces of work in CRU were at odds with acceptable scientific practice and with the University's codes and policies, including that on Freedom of Information, we announced on 3 December an Independent Review led by Sir Muir Russell. The University will act appropriately on the Review's findings and any recommendations it makes.

- 2. Are the terms of reference and scope of the Independent Review announced on 3 December 2009 by UEA adequate?
- 2.1 The terms of reference address the key allegations against colleagues:
 (a) manipulation of data, (b) manipulation of the peer review system, and (c) whether or not data have been dealt with in accordance with best scientific practice and the provisions of the Freedom of Information Act (FOIA).
- 2.2 To ensure the scope of Sir Muir Russell's review embraces all that is pertinent, the terms of reference also give him discretion to amend or add to them as he feels necessary.
- 2.3 Alongside Sir Muir Russell's Review, we have decided on an additional scientific assessment of CRU's key scientific publications; an external reappraisal of the science itself. The Royal Society has agreed to assist the University in identifying assessors with the requisite experience, standing and independence.
- 3. What are the implications of the disclosures for the integrity of scientific research?
- 3.1 The immediate effect of these disclosures has been to open up the climate change debate. The long-term effects, within the scientific community, depend on the outcome of the two Reviews referred to above. We fully accept that any of the following allegations, if proven, would have implications for the integrity of the scientific research and the scientists involved. They would also damage the elements of CRU's contribution to the body of international climate science involved; given the scale of that international body of work, it is doubtful that they would weaken the implications of modern climate research as a whole.
 - (i) Fabrication: the creation of fictitious primary data, or documentation.
 - (ii) Intent to mislead: deliberate selection and/or manipulation of data, or documentation.
 - (iii) Misrepresentation: undisclosed suppression of findings and data.
 - (iv) Deficient management, preservation and dissemination of data (and primary materials, such as tree samples).
 - (v) Suppression or distortion of others' findings.

3.2 The Independent Review will examine whether there is substance to any of the allegations against CRU. Some detailed preliminary comments from CRU on the allegations are given below.

Comment from the Climatic Research Unit at UEA

3.3 Fabrication of primary data

(a) The CRU global and hemispheric land area temperature record
All of CRU's primary (raw) station temperature data were accessed from National
Meteorological Services (NMSs), or from published collations of such station data
(e.g. the Global Historical Climatology Network, GHCN), to which anyone can gain
access. CRU's sources have been published in various publications (e.g. TR017,
TR022, TR027, Brohan et al., 2006).

(b) Tree-ring data

Virtually all primary data used by CRU are acquired from collaborators or from public databases. In the "trick" and "hide the decline" case, discussed below, the data were provided by the Swiss Federal Institute of Forest, Snow and Landscape Research, and are publicly available.

3.4 Intent to mislead

()

- 3.4.1 CRU has been accused of manipulating/selecting data to exaggerate global warming. We strongly reject this, as a misunderstanding of the standard statistical techniques involved. It is sometimes necessary to adjust temperature data because changes in station location, instrument or observation time, or in the methods used to calculate monthly average temperatures can introduce false trends. These have to be removed or adjusted, or else the overall series of values will be incorrect. In the early 1980s, CRU painstakingly examined the long-term homogeneity of each station temperature series which it acquired. As a result, data were adjusted for about 10% of the sites, that is 314 sites out of a then-total of 3276. This was in complete accordance with standard practice, and all adjustments were documented in TR017, TR022, TR027.
- 3.4.2 A number of stations with problems too severe to adjust were omitted from the dataset. They were generally from data-dense regions, and so their exclusion did not materially affect the global record. All omissions were documented (TR022, TR027, Jones et al., 1986a, b).
- 3.4.3 Homogeneity assessment is best performed in-country by the NMSs themselves as they have access to the detailed local knowledge (Jones & Moberg, 2003). A number of NMSs have undertaken such exercises and, as they have become available, their homogenised series have been used to replace those in the CRU dataset.
- 3.4.4 One major CRU objective was to produce a gridded temperature dataset. This shows spatial patterns of change and, above all, avoids bias towards regions of greater station density. To produce the best-possible gridded dataset, it is necessary to utilise some of the station series which have been adjusted.

- 3.4.5 When the station temperature series are added together to produce global or hemispheric average temperatures, the adjustments (positive and negative) tend to cancel out; therefore having *little net effect* on the global/hemispheric average temperature record.
- 3.4.6 On 18 December 2009 the Met Office Hadley Centre (MOHC) released data from 1741 of the stations which comprise the World Meteorological Organization (WMO) Regional Baseline Climatological Network from which data are freely available, and which are a subset of CRUTEM3, as the CRU data set is known. The global average temperature record from this subset is very similar to the record derived from the full CRUTEM3 dataset. MOHC subsequently released data from 3780 stations (80% of the stations in CRUTEM3). Figure 1 shows the close agreement, with slight deviations only occurring in the 19th century (the early relatively data-poor period).
- 3.4.7 CRU has been accused of the effective, if not deliberate, falsification of findings through deployment of "substandard" computer programs and documentation. But the criticized computer programs were not used to produce CRUTEM3 data, nor were they written for third-party users. They were written for/by researchers who understand their limitations and who inspect intermediate results to identify and solve errors.
- 3.4.8 The different computer program used to produce the CRUTEM3 dataset has now been released by the MOHC with the support of CRU.

3.5 Misrepresentation

()

3.5.1 CRÛ has been accused of hiding data flaws and research findings. But here there has been a simple misunderstanding of technical jargon.

3.5.2 "Trick" and "hide the decline".

These accusations relate to the portrayal of the 1000-year Northern Hemisphere temperature record in one diagram in a publication for the WMO in 1999. The diagram integrated temperature records based on thermometer observations (which started in the 1850s) with "proxy" data (from ice cores, tree-rings, written and other sources), extending much further into the past than the instrumental record.

- 3.5.3 One of the three proxy-temperature reconstructions was based entirely on a particular set of tree-ring data which exhibited strong correlation with thermometer measured temperature from the 19th century to the mid-20th century. But after 1960 it did not show a realistic trend of temperature by comparison with these thermometer measurements.
- 3.5.4 This observation (that some otherwise temperature-sensitive tree-ring chronologies do not track the observed rise in recent temperatures) is well known. It is referred to in the literature as the "decline" or "divergence" phenomenon. The use of the term "hiding the decline" referred to the method of combining the tree-ring evidence and instrumental temperatures, removing the post-1960 tree-ring data to avoid giving a false impression of declining temperatures. What it did *not* refer to was any decline in the actual thermometer evidence of recent warming.

- 3.5.5 CRU never sought to disguise this specific type of tree-ring "decline or divergence". On the contrary, CRU has published a number of pioneering articles that illustrate, suggest reasons for, and discuss the implications of this interesting phenomenon (e.g. Briffa et al., 1998 a, b; Briffa, 2000 listed in the legend of the WMO figure).
- 3.5.6 As for the (now notorious) word "trick", so deeply appealing to the media, this has been richly misinterpreted and quoted out of context. It was used in an informal email, discussing the difficulties of statistical presentation. It does not mean a "ruse" or method of deception. In context it is obvious that it is used in the informal sense of "the best way of doing something". In this case it was "the trick or knack" of constructing a statistical illustration which would combine the most reliable proxy and instrumental evidence of temperature trends.

3.6 Urbanization in China

- 3.6.1 CRU has been accused of "hiding" climate data flaws by not acknowledging the degree to which the warming trend in China might be influenced by urbanization effects at some stations, and by withholding information on station moves, in Jones et al. (1990). This is not true.
- 3.6.2 CRU requested, and accepted, the best station temperature data obtainable from China at that time via a scientist working in the US in 1989/90. CRU responded positively to a Freedom of Information Act (FOIA) request in 2007 for these station data (2 sets of 42 stations one rural, one urban), including location information for all stations. Jones et al. (1990) was referred to in the IPCC 2007 Report, as were other papers examining urbanization effects in other areas which, in turn, corroborated CRU's findings that urbanization influences on a global land scale are small.
- 3.6.3 Furthermore, in 2007, CRU embarked on a detailed study of temperature trends in China using data from the China Meteorological Administration (CMA). An assessment of the consistency of 728 stations was published in Li and Li (2007), and all series were assessed and some adjusted by CMA for changes in location. CRU acquired the station data for the same stations that were used in the 1990 paper.
- 3.6.4 The subsequent analysis (Jones et al., 2008), which used the CMA data for the same period (1954-1983) as the 1990 study, produced results that were almost identical. Using the longer measurement records now available from CMA, it also concluded that there was a likely urbanization effect in China of 0.1°C per decade for the period 1951-2004. After making allowance for this urbanization effect, there is still a remaining large-scale climatic warming trend of 0.15°C per decade over the period 1951-2004, increasing to 0.47°C per decade over the period 1981-2004.
- 3.6.5 There was no attempt at misrepresentation. This is simply an example of scientific research evolving as more and better data become available.
- 3.7 Deficient management, preservation and dissemination of data
 3.7.1 CRU has been accused of "losing" primary station data. The accusation arose from misinterpretation of a CRU statement in summer 2009. CRU has not lost data. All the primary station data still exist, in the World Weather Records or in NMS

Yearbooks and similar sources (particularly GHCN). The sources are documented in CRU reports published in the 1980s, and in later peer-reviewed papers.

- 3.7.2 CRU has been accused of refusing to release data requested under the FOIA. There are many obstacles outside CRU's control surrounding the release of data provided by NMSs. Many FOIA requests made to CRU related to primary data provided by the NMSs. Some of these data are subject to formal non-publication agreements between the NMS and CRU. Other primary data had been provided to CRU on an individual-to-individual basis, with accompanying verbal agreements that they may be used within the gridded dataset, but should not be passed on to others. CRU responded to the FOIA requests for primary data by pointing out that data from approximately 90% of the stations in the CRU dataset are available from other sources, particularly GHCN.
- 3.7.3 Using these other sources, it has been possible for a number of years for anyone to construct their own global land temperature record, using whichever combination of stations they might choose.
- 3.7.4 In July 2009 UEA received an unprecedented, and frankly administratively overwhelming, deluge of FOIA requests related to CRU. These amounted to 61 requests out of a 2009 total of 107 related to CRU, compared to annual totals of 2 in 2008 and 4 in 2007 (University totals for those years were 204, 72 and 44 respectively). Accordingly CRU approached the Global Climate Observing System (GCOS), an organization within the WMO, to see if it would request the WMO to seek permission from each of its members (the NMSs) for CRU to release the primary station data for each country. WMO declined, but indicated that the appropriate procedure was for the request to come from the UK NMS (the Met Office). The Met Office agreed this was the correct procedure, and sent a letter of support to accompany an explanatory letter to each NMS on 30 November 2009. As of 1 February 2010, 35 responses to 160 requests have been received from the NMSs. Most are positive, but some are negative (confirming the constraints preventing CRU releasing the requested data).
- 3.7.5 Though never the subject of an FOIA request, CRU has been accused of not releasing original tree-ring width measurements from which regional chronologies in northern Eurasia were constructed (Briffa, 2000; Briffa et al., 2008). These datasets were never "owned" by CRU, but were provided by collaborating researchers. Initial requests for these data were redirected towards the appropriate institutions and individuals. Barly release of these data (around 2000) was specifically embargoed by those collaborators who were still working towards further publications. Following publication of Briffa et al. (2008), CRU approached Swedish, Finnish and Russian colleagues for permission to release data. They were released in 2008/09.
- 3.7.6 On 22 January 2010, the Information Commissioner's Office (ICO) released a statement to a journalist, which was widely misinterpreted in the media as a finding by the ICO that UEA had breached Section 77 of the FOIA by withholding raw data. A subsequent letter to UEA from the ICO (29 January 2010) indicated that no breach of the law has been established; that the evidence the ICO had in mind about whether there was a breach was no more than *prima facie*; and that the FOI request at issue did not concern raw data but private email exchanges.

3.8 Suppression or distortion

- 3.8.1 There has been much speculation over remarks made in an email about papers published by McKitrick & Michaels (2004) and Soon & Baliunas (2003), where it appears there was an attempt to exclude them from the Fourth Assessment Report of the IPCC (AR4).
- 3.8.2 The remarks were made before any of the four planning meetings for AR4. In the event, both papers were cited in AR4.
- 3.8.3 The original email was expressing doubts about the scientific rigour of the two papers. This concern appears to have been justified. The editor and publisher of the journal which published the second paper subsequently acknowledged the need to improve editorial procedures, and later related events led to half the journal's Editorial Board resigning. The first paper has subsequently received criticism over whether the statistical approaches used can support its conclusions (Benestad, 2004; Schmidt, 2009).
- 4. How independent are the other two international datasets?
- 4.1 Although all three datasets have a degree of commonality in terms of the sources of primary data, they can be regarded as completely independent in terms of adjustments, and in terms of the methodology for combining the data, including gridding methodologies.
- 4.2 The three basic datasets for land areas of the world are:

CRUTEM3 (Brohan et al., 2006)

((

Dataset held by the Goddard Institute for Space Studies (GISS, USA) (Hansen et al., 2001)

GHCN dataset held by National Climatic Data Center (NCDC, USA) (Smith & Reynolds, 2005; Smith et al., 2008)

- 4.3 All these datasets rely on primary observations recorded by NMSs across the globe.
- 4.4 GISS and NCDC each use at least 7200 stations. CRUTEM3 uses fewer. In CRUTEM3, each monthly temperature value is expressed as a departure from the average for the base period 1961-90. This "anomaly method" of expressing temperature records demands an adequate amount of data for the base period; this limitation reduces the number of stations used by CRUTEM3 to 4348 (from the dataset total of 5121). The latest NCDC analysis (Smith et al. 2008) has now moved to the "anomaly method" though with different refinements from those of CRU.
- 4.5 NCDC and GISS use different approaches to the problem of "absolute temperature" from those of CRUTEM3. The homogeneity procedures undertaken by GISS and NCDC are completely different from those adopted for CRUTEM3. NCDC has an automated adjustment procedure (Menne & Williams, 2009), whilst GISS additionally makes allowances for urbanization effects at some stations (Hansen et al., 2001).

- 4.6 Figure 2 shows five series of global/hemispheric average temperatures, including three versions from the NCDC dataset. One of the NCDC series is based on station temperature data which have undergone no adjustments for homogeneity. All data series follow each other, and are well within the error ranges calculated by Brohan et al. (2006). The similarities are most striking over the last 70 years, and in the Northern Hemisphere, reflecting the better station coverage.
- 4.7 Another independent verification of the accuracy of CRUTEM3, for the period 1973-2008, has been published by Simmons et al. (2010). CRUTEM3 is compared with reanalysis data which are, essentially, current weather forecast data, updated each day with new observations. The correlation between the two global series is extremely close, and between 0.96 and 0.99 for the six major continents (Antarctica was excluded because of lack of sufficient data for this analysis).
- 4.8 There is excellent agreement between the three independently developed series at the global and hemispheric scales. The new reanalysis data agree almost completely with CRUTEM3 when averaged over the regions for which CRUTEM3 has data.

5. Concluding Comments from the Vice-Chancellor

The University looks forward to the results of the two reviews of the CRU. Given that the stakes for humanity are so high in correctly interpreting the evidence of global warming, we would meanwhile urge scientists, academics, journalists and public servants to resist the distortions of hearsay evidence or orchestrated campaigns of misinformation, and instead to encourage open, intelligent debate.

10 February 2010

The list of references and Figures are included in the Appendix to the Memorandum.

Appendix

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Available at http://www.cru.uea.ac.uk/st/

Figure 1: Average land temperatures as anomalies from 1961-90 for the globe and Northern and Southern Hemispheres. The black line is based on all stations contributing to CRUTEM3, while the red line is based on the 80% of stations released by MOHC. The green shading encompasses the 2.5 and 97.5% uncertainty ranges (Brohan et al, 2006)

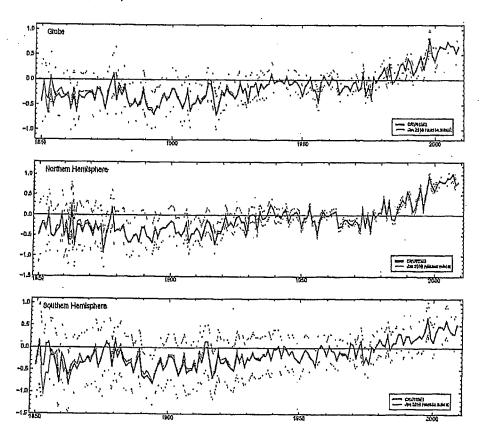
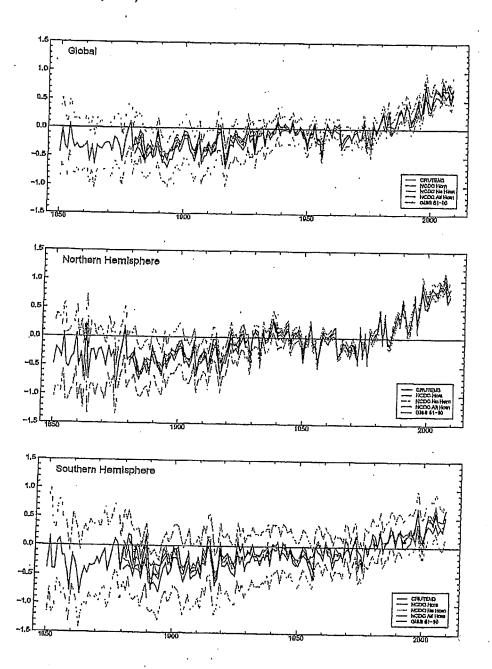


Figure 2: Average land temperatures as anomalies from 1961-90 for the globe and Northern and Southern Hemispheres. The black line is based on all stations contributing to CRUTEM3. The blue line is for GISS (Hansen et al. 2001). The other three series are based on NCDC series: purple is based on Smith et al. (2008), red on Smith and Reynolds (2005) and the orange on unadjusted station data from GHCN. The green shading encompasses the 2.5 and 97.5% uncertainty ranges (Brohan et al, 2006)



From: Sent: To:

Simon Dunford (ARM)

26 February 2010 11:09 Trevor Davies (VCO); Liss Peter Prof (ENV); Jones Philip Prof (ENV); Osborn Timothy Dr

(ENV); Edward Acton (VCO); Preece Alan Mr (MAC); Annie Ogden (ARM);

neil@neilwallis.co.uk; Sam BOWEN

Subject:

Hottest January

This kind of thing should help on Monday: http://www.dailyexpress.co.uk/posts/view/160556/Weather-Hottest-January-ever-say-climateexperts/

Simon Dunford, Press Officer, University of East Anglia, Norwich, NR4 7TJ. <u>Tel:+44</u> (0)1603 592203 www.uea.ac.uk/comm

A PREMIER RESEARCH AND TEACHING UNIVERSITY Third for facilities and fifth overall in the Times Higher Student Experience Survey 2010 2009 "What Uni" Student Choice Award winner and 3rd amongst mainstream English

universities in the National Student Survey World top 200, European top 100, UK top 30 (Times League Table 2010)

Norwich: fourth highest cited UK city for science, thanks to the University and our Norwich Research Park partners.

Lisa Williams (VCO)

Sent:

26 February 2010 12:29

To:

Sam BOWEN; neil@neilwallis.co.uk Edward Acton (VCO)

Cc:

Subject:

S&T committee: all memos on the web

Dear Sam and Neil

FYI - All 54 memoranda are now published:

http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsctech/memo/climatedata/contents.htm

Lisa

Lisa Williams, Senior Assistant Registrar Vice-Chancellor's Office University of East Anglia Norwich NR4 7TJ

Tel: 01603 592229

Email: lisa.williams@uea.ac.uk

This email is confidential and may be privileged. If you are not the intended recipient please accept my apologies; please do not disclose, copy or distribute information in this email or take any action in reliance on its contents: to do so is strictly prohibited and may be unlawful. Please inform me that this message has gone astray before deleting it. Thank you for your co-operation.

Neil Wallis [neil@neilwallis.co.uk] From: 26 February 2010 13:15 Sent: Preece Alan Mr (MAC); Sam BOWEN; Annie Ogden (ARM); Simon Dunford (ARM); Lisa To: Williams (VCO) Edward Acton (VCO); Trevor Davies (VCO); Brian Summers (REG) Cc: Re: Film Crew Subject: Agreed. Can you liaise with Sam please re the film crew? Thanks, Neil On 26/02/2010 13:05, "Preece Alan Mr (MAC)" < A.Preece@uea.ac.uk> wrote: > Dear Sam > > Just to confirm that we will want the film crew for Monday. At c > £600+VAT I am happy to agree it. Let me know if that price is about > right. We remain with Plan A - Edward coming out of Portcullis House > after giving evidence to do a brief statement but no questions. > To avoid the pain on colleagues' in-boxes I would suggest that we cut > future emails about Monday's logistics to those sent this one as a > primary email. So cut Edward, Trevor and Brian (unless they signal > otherwise but I think they may be glad of the relief). Lisa and I > will ensure that they get a summary document with timings at the end of the day. > Regards > Alan > Alan Preece > Director of Marketing and Communications University of East Anglia > 01603 593015 > 3rd for facilities and 5th overall in the Times Higher Student > Experience Survey 2010 > 2009 "What Uni" Student Choice Award winner and 3rd amongst mainstream > English universities in the National Student Survey > World top 200, European top 100, UK top 30 (Times League Table 2010) > Norwich: fourth highest cited UK city for science, thanks to the > University and our Norwich Research Park partners. Neil Wallis Neil Wallis Media Limited 07710 664144

neil@neilwallis.co.uk

From: Sent: Preece Alan Mr (MAC) 05 March 2010 14:18

To:

Neil Wallis

Cc:

Lisa Williams (VCO); Trevor Davies (VCO); Edward Acton (VCO); Brian Summers (REG);

Annie Ogden (ARM); Simon Dunford (ARM)

Subject:

Next week

Edward has suggested that there should be a meeting to 'put together a proposed strategy'. I believe you said that you were available on Tuesday next week. Is that still possible or would you prefer a different date? Do you have a view on who should be at the meeting (which may constrain the pace at which this can be set up)?

Alan

Alan Preece Director of Marketing and Communications University of East Anglia 01603 593015

3rd for facilities and 5th overall in the Times Higher Student Experience Survey 2010

2009 "What Uni" Student Choice Award winner and 3rd amongst mainstream English universities in the National Student Survey

World top 200, European top 100, UK top 30 (Times League Table 2010)

Norwich: fourth highest cited UK city for science, thanks to the University and our Norwich Research Park partners.

Preece Alan Mr (MAC)

Sent:

08 March 2010 08:41

To:

Neil Wallis

Cc;

Lisa Williams (VCO); Annie Ogden (ARM); Simon Dunford (ARM); Trevor Davies (VCO);

Edward Acton (VCO); Jacqui Churchill (VCO); Elaine Rymarz (REG)

Subject:

RE: Next week

Friday appears to be agreeable with everyone's diaries.

First hour in my room then decamp to Edward's for the second hour. Lisa will join us for

Elaine - I wonder if you mind seeing if Brian wants to attend either or both.

Alan

Alan Preece

Director of Marketing and Communications University of East Anglia 31603 593015

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World top 200, European top 100, UK top 30 (Times League Table 2010)

Norwich: fourth highest cited UK city for science, thanks to the University and our Norwich Research Park partners.

```
>----Original Message----
>From: Neil Wallis [mailto:neil@neilwallis.co.uk]
>Sent: Friday, March 05, 2010 5:08 PM
>To: Preece Alan Mr (MAC)
>Subject: Re: Next week
>I think its two stages - I think that first you me Annie and Simon
>should have say an hour to put together our own thoughts.
>A detailed grid/chronology going forward would be very useful to work
>I think it would be useful if you, I and the others had some email
>exchanges during the week to swap around some ideas to get our thought
>processes going?
>BTW, I've got a meeting with Sam and Alan Edwards here on Monday
>morning to have a bit of a brainstorm too.
>Then we should pencil in another hour to talk through OUR combined
>thoughts with Edward and Trevor, and get their input and suggestions -
>you will know better than me if Brian and Lisa should attend then too.
>So if we could do, say, 12.30 -2.30pm on Friday it would be great.
>WDYT?
>Best,
>Neil
>
>On 05/03/2010 15:34, "Preece Alan Mr (MAC)" <<u>A.Preece@uea.ac.uk</u>> wrote:
```

```
>> I can do Friday . Who else would you like to attend and how
 >long would you
 >> like to meet for?
 >>
 >> Regards
 >>
 >> Alan
 >>
 >> Alan Preece
 >> Director of Marketing and Communications University of East Anglia
 >> 01603 593015
 >> 3rd for facilities and 5th overall in the Times Higher
 >Student Experience
 >> Survey 2010
 >> 2009 "What Uni" Student Choice Award winner and 3rd amongst
 >mainstream English
 >> universities in the National Student Survey
 >> World top 200, European top 100, UK top 30 (Times League Table 2010)
 >> Norwich: fourth highest cited UK city for science, thanks to
 >the University
 >> and our Norwich Research Park partners.
 >>
 >>
 >>
 >>> ----Original Message----
 >>> From: Neil Wallis [mailto:neil@neilwallis.co.uk]
 >>> Sent: Friday, March 05, 2010 3:20 PM
 >>> To: Preece Alan Mr (MAC)
 >>> Cc: Williams Lisa Ms (VCO); Davies Trevor Prof (ENV); Acton Edward
 >>> Prof (VCO); Summers Brian Mr (REG); Ogden Annie Ms (MAC); Dunford
 >>> Simon Mr (MAC)
 >>> Subject: Re: Next week
 >>>
 >>> I had been going to suggest the Friday, as it would have given us
 >>> chance to see how the week unfolded with the various bits unfolding.
 >>> I'm also wanted to try and see a couple of people early in the week
>>> (eg I'm having lunch with the
>>> I wont know until Monday if I can do Luesday. I could do Wednesday
>>> but have
>>> to be back in London by 6.30pm.
                                      Thursday is also out.
>>> So as I said Friday looked best to me, tho at a push I could make
>>> Wednesday.
>>> WDYT?
>>> Neil
>>>
>>>
>>> On 05/03/2010 14:17, "Preece Alan Mr (MAC)"
><A.Preece@uea.ac.uk> wrote:
>>>> Edward has suggested that there should be a meeting to 'put
>>> together a
>>>> proposed strategy'. I believe you said that you were
>>> available on Tuesday
>>>> next week. Is that still possible or would you prefer a
>>> different date? Do
>>>> you have a view on who should be at the meeting (which may
>>> constrain the pace
```

1

```
>>>> at which this can be set up)?
>>>>
>>>> Alan
>>>>
>>>> Alan Preece
>>>> Director of Marketing and Communications University of East Anglia
>>>> 01603 593015
>>>>
>>>> 3rd for facilities and 5th overall in the Times Higher
>>> Student Experience
>>>> Survey 2010
>>>>
>>>> 2009 "What Uni" Student Choice Award winner and 3rd amongst
>>> mainstream English
>>>> universities in the National Student Survey
>>>>.
>>>> World top 200, European top 100, UK top 30 (Times League
>Table 2010)
>>>>
>>>> Norwich: fourth highest cited UK city for science, thanks to
>>> the University
>>>> and our Norwich Research Park partners.
>>> Neil Wallis
>>>
>>> Neil Wallis Media Limited
>>> 07710 664144
>>> <u>neil@neilwallis.co.uk</u>
>>>
>>>
>>>
>>>
>Neil Wallis
>Neil Wallis Media Limited
>07710 664144
><u>neil@neilwallis.co.uk</u>
```

Philip Jones (ENV)

Sent:

08 March 2010 16:06

To:

Lisa Williams (VCO); Edward Acton (VCO); Brian Summers (REG); Trevor Davies (VCO);

Preece Alan Mr (MAC); Annie Ogden (ARM); Neil Wallis

Cc:

Simon Dunford (ARM)

Subject:

Re: supplementary submission

Lisa.

Letter from Sweden was dated 21/12/09.

Phil

At 16:02 08/03/2010, Williams Lisa Ms (VCO) wrote:

Dear all

Please find attached the draft supplementary submission. Phil Jones section has been agreed already. Sections A and B are new.

This is due in by 5pm today. Please let me have your comments asap - and Annie/Simon do you have the date of letter from SMHI.

Best, Lisa

Lisa Williams, Senior Assistant Registrar Vice-Chancellor's Office University of East Anglia Norwich NR4 7TJ

Tel: 01603 592229

Email: lisa, williams@uea.ac.uk

This email is confidential and may be privileged. If you are not the intended recipient please accept my apologies; please do not disclose, copy or distribute information in this email or take any action in reliance on its contents: to do so is strictly prohibited and may be unlawful. Please inform me that this message has gone astray before deleting it. Thank you for your co-operation.

Prof. Phil Jones

Climatic Research Unit

Telephone +44 (0) 1603 592090

School of Environmental Sciences

Fax +44 (0) 1603 507784

University of East Anglia

Norwich, NR4 7TJ, UK

Email p.jones@uea.ac.uk

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Lisa Williams (VCO)

Sent:

08 March 2010 17:17

To:

Edward Acton (VCO); Brian Summers (REG); Annie Ogden (ARM); Trevor Davies (VCO);

Jones Philip Prof (ENV); Neil Wallis; Preece Alan Mr (MAC); Liss Peter Prof (ENV)

Subject:

final version of supplementary memo and attachment

Attachments:

S&T supplementary 8.3.10.doc; Letter from ICO to UEA - 03.03.10.doc

Dear all

For your records, here is the final version of the supplementary memo to HoC select committee which has now been submitted.

Best, Lisa

Lisa Williams, Senior Assistant Registrar Vice-Chancellor's Office University of East Anglia Norwich NR4 7TJ

Tel: 01603 592229

Email: lisa,williams@uea.ac.uk

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Supplementary Memorandum from the University of East Anglia House of Commons Science and Technology Committee

Supplementary Submission from Professor Phil Jones

I was confused by some of the lines of questioning from Mr Stringer, for which I apologise. Now that I have seen the transcript of his questioning, I welcome the opportunity to provide clearer answers.

In his question, un-numbered between Q91 and Q92, he acknowledges that "it is not the data which has been kept secret". In Q95 he states that "nobody has ever argued that the data was not available". I am afraid that when I heard the word data, my mind was instantly drawn to the very large volume of, mostly misleading, comments which have been made about data availability over the last three months, and the university's continuing efforts in trying to counter the mis-representations.

From the transcript, Mr Stringer's questions appear, in fact, to be focused on other information, such as "computer programs and methodology and which weather stations you have actually been putting into the papers" (in between Q91 and Q92). Although this point was emphasised by Mr Willis (Q92) – "without understanding of the methodology, the peer review system is rather defunct" – because of the tension of the occasion, I still did not pick up the questions' emphasis.

The key issue, both scientifically and for answering Mr Stringer's questions, is whether we have provided sufficient information to enable others to reproduce and check our scientific results; especially the global land temperature dataset that we call CRUTEM3. My answer to this is "yes".

The first requirement is that others should be able to obtain the data — in this case, temperature observations from weather stations around the world. Mr Stringer acknowledges that the data themselves are available, but perhaps not the list of which stations we actually used. I did later make it clear that the list of weather stations used in CRUTEM3 was made available in September 2007 (responses to Q98 and Q99). Prior to this, lists of stations used in earlier versions of our dataset were published in 1985/1986 and 1991.

The second requirement is that we should provide sufficient detail of the analysis methods to enable others to implement them and carry out their own check of our results. Mr Stringer's questioning seemed to imply that provision of computer programs was the only way in which this could be achieved, and this distracted me into concentrating on that aspect. However, I should have made clear that the analysis methods used in producing the CRUTEM3 dataset are relatively simple, and all are described in our various published articles in sufficient detail to allow others to implement them. Research papers are not generally accepted for publication in peer-reviewed journals unless sufficient details on both the nature of the observations and the methodology are provided.

The issue of whether computer programs are needed to allow our results to be reproduced is an interesting one. The principle of reproducibility in science research is an important one. It should be undertaken by independent researchers who evaluate

the experiment or investigation, based on the original experimental or methodological description. One of the objectives of the peer review process is that there is sufficient methodological detail for the investigation to be reproduced by independent competent researchers.

A distinction should be made between reproducibility and repeatability. Repeatability measures the success rate of an 'experiment'. If the experiment is a statistical investigation, using the same data with the same computer programs is bound to produce the same result. That will not establish the reproducibility of an investigation.

Even though reproducibility does not necessarily depend on providing computer programs, in my response to Q's 141 and 142, I also emphasised that the computer program code for CRUTEM3 has been released by the Met Office. It is their version of the program written in Perl. CRU has our own version of the program, but it is written in an older programming language called Fortran. Given the same input data, the Met Office Perl program and our Fortran program produce the same global land temperature dataset – such correspondence is one method of quality control.

To return to Mr Willis's statement in Q92, I would like to point out that the peer review system is certainly not defunct. It is valued by the international science community precisely because it does allow all research findings to be exposed to informed sceptical probing and scrutiny by any competent scientist. Without it, science debate can be, and has been, reduced to one-way traffic of opinion and assertion.

Supplementary Submission from the University of East Anglia

- A. With reference to comments in the meeting pertaining to the Freedom of Information Act (Q58, Q130), the University would like to draw the Committee's attention to the most recent letter from the Information Commissioner's Office of 3 March 2010. It makes plain that there is no assumption by the ICO, prior to investigation, that UEA has breached the Act; and that no investigation has yet been completed.
- B. In his response to Q94 concerning the publication of data, Professor Acton outlined that a number of countries including Sweden had not given permission for UEA to publish data from their Meteorological Services on the UEA website. The information relating to Sweden was based upon a letter from the Swedish Meteorological and Hydrological Institute (SMHI) to Prof Phil Jones dated 21 December 2009. A second letter from SMHI received 8 March 2010 now gives permission for CRU to publish its Swedish data on the UEA website.

```
From:
                        Trevor Davies (VCO)
 Sent:
                        25 March 2010 12:18
                        Simon Dunford (ARM); Neil Wallis; Annie Ogden (ARM); Preece Alan Mr (MAC); Lisa
 To:
                        Williams (VCO); Edward Acton (VCO)
 Subject:
 Well done Simon.
 Trevor
 >----Original Message----
 >From: Dunford Simon Mr (MAC)
 >Sent: Thursday, March 25, 2010 12:13 PM
 >To: Neil Wallis; Ogden Annie Ms (MAC); Preece Alan Mr (MAC); Davies
 >Trevor Prof (ENV); Williams Lisa Ms (VCO); Acton Edward Prof (VCO)
 >Subject:
 >Dear all
 >Just had a taxing phone call from (Sunday Times). He >wanted update on SAP, Muir Russell, police and Commons (he was aware
 >that this will definitely be published next week). For info, among his
 >many questions (all of which I have dealt with):
 >Why has Oxburgh not got his own press team?
 >What staff does Oxburgh have working for him?
 >When will Oxburgh report?
>What is the role of Neil Wallis?
>Can he speak to Neil Wallis?
>What is Neil Wallis' background?
>When will Muir report?
>Why can't he speak to Phil Jones and Keith Briffa?
>Has the university told Phil Jones and Keith Briffa that they are not
>allowed to do interviews?
                                    and Norfolk Police so will probably
>He took numbers for
>contact them today.
. Cheers
>Simon.
>Simon Dunford, Press Officer,
>University of East Anglia,
>Norwich, NR4 7TJ.
>Tel:+44 (0)1603 592203
>www.uea.ac.uk/comm
>A PREMIER RESEARCH AND TEACHING UNIVERSITY Third for facilities and
>fifth overall in the Times Higher Student Experience Survey 2010
>2009 "What Uni" Student Choice Award winner and 3rd amongst mainstream
>English universities in the National Student Survey World top 200,
>European top 100, UK top 30 (Times League Table 2010)
>Norwich: fourth highest cited UK city for science, thanks to the
>University and our Norwich Research Park partners.
>This email is confidential and may be privileged. If you are not the
>intended recipient please accept my apologies; please do not disclose,
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>copy or distribute information in this email or take any action in >reliance on its contents: to do so is strictly prohibited and may be >unlawful. Please inform me that this message has gone astray before >deleting it. Thank you for your co-operation.

Brian Summers (REG)

Sent:

30 March 2010 14:18 Edward Acton (VCO)

To: Subject:

FW: UEA/Outside

I assume the answer to be yes?

Brian

This email is confidential and may be privileged. If you are not the intended recipient please accept my apologies; please do not disclose, copy or distribute information in this email or take any action in reliance on its contents: to do so is strictly prohibited and may be unlawful. Please inform me that this message has gone astray before deleting it. Thank you for your co-operation.

From: Olga Aguilera-Lopez [mailto:olga@outside-org.co.uk]

Sent: Tuesday, March 30, 2010 11:01 AM

To: Summers Brian Mr (REG) Subject: UEA/Outside

Dear Brian

I hope you are well. I have been receiving updates from Neil Wallis and assume that we are continuing to provide services for UEA in April on the same basis as March. If you could confirm this is the case I would appreciate it and will arrange billing accordingly.

Best regards

Olga.

Olga Aguilera-López | Finance Director The Outside Organisation Ltd **Butler House** 177-178 Tottenham Court Road London W1T 7NY

T: +44 (0)20 7436 3633 F: +44 (0)20 7462 2920

www.outside-org.co.uk

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Lisa Williams (VCO)

Sent:

13 April 2010 18:01

To:

Edward Acton (VCO); Trevor Davies (VCO); Liss Peter Prof (ENV); Nell Wallis; Annie

Ogden (ARM)

Subject:

final version

Attachments:

University response to Oxburgh report.doc

Attached is the final version of the UEA response.

Lisa Williams, Senior Assistant Registrar Vice-Chancellor's Office University of East Anglia Norwich NR4 7TJ

Tel: 01603 592229

Email: lisa.williams@uea.ac.uk

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EMBARGOED TO 11.00 14 April 2010



Response by the University of East Anglia to the Report by Lord Oxburgh's Science Assessment Panel

UEA welcomes the Report by the Lord Oxburgh's Independent Panel, both in respect of the Climatic Research Unit (CRU) being cleared of any scientific impropriety and dishonesty, and the suggestions made for improvement in some other areas.

The Oxburgh findings are the result of the latest scrutiny of CRU's research. The first was the original peer review which led to publication in some of the world's leading international science journals; the second was the Inquiry by the Parliamentary Science and Technology Committee. Taken together, these must represent one of the most searching examinations of any body of scientific research. The veracity of CRU's research remains intact after this examination.

It is gratifying to us that the Oxburgh Report points out that CRU has done a public service of great value by carrying out meticulous work on temperature records when it was unfashionable and attracted little scientific interest, and that the Unit has been amongst the leaders in international efforts to determine the overall uncertainty in the derived temperature records. Similarly, the Report emphasises that all of CRU's published research on the global land-based instrumental temperature record included detailed descriptions of uncertainties and appropriate caveats. We also welcome the confirmation that, although some have accused CRU of trying to mislead, the Unit's published research emphasises the late 20th Century discrepancy between tree-based proxy reconstructions of temperature and instrumental observations.

The Report points out where things might have been done better. One is to engage more with professional statisticians in the analysis of data. Another, related, point is that more efficacious statistical techniques might have been employed in some instances (although it was pointed out that different methods may not have produced different results). Specialists in many areas of research acquire and develop the statistical skills pertinent to their own particular data analysis requirements. However, we do see the sense in engaging more fully with the wider statistics community to ensure that the most effective and up-to-date statistical techniques are adopted and will now consider further how best to achieve this.

Another area for suggested improvement is in the archiving of data and algorithms, and in recording exactly what was done. Although no-one predicted the import of this pioneering research when it started in the mid-1980's, it is now clear that more effort needs to be put into this activity. CRU, and other parts of the climate science community, are already making improvements in these regards, and the University will continue to ensure that these imperatives are maintained.

The Independent Climate Change E-mail Review investigation is underway, and therefore some important issues are still under active consideration. This document is our immediate written response to the Oxburgh Report. In the coming weeks we shall be considering precisely how we act upon the detailed findings of the Oxburgh Report, together with the findings of the parliamentary select committee and, in due course, the Independent Muir Russell review report.

We are grateful to Lord Oxburgh, and his international expert team, for the fair, efficient and prompt way in which they conducted their Assessment.

Trevor Davies (VCO)

Sent:

10 May 2010 13:17

To:

Edward Acton (VCO); Brian Summers (REG); Annie Ogden (ARM); Simon Dunford

(ARM); Preece Alan Mr (MAC); Neil Wallis

Subject:

Major Reports on Climate Change

US National Academy of Scinces are scheduled to release three major reports on climate change on May 19.

Trevor

Professor Trevor Davies

Pro Vice-Chancellor Research, Enterprise & Engagement University of East Anglia Norwich,

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Neil Wallis [neil@neilwallis.co.uk] 17 June 2010 15:53

Sent: To: Subject:

Trevor Davies (VCO); Edward Acton (VCO); Lisa Williams (VCO)

Interesting

FYI Neil Wallis Neil Wallis Media Limited 07710 664144 neil@neilwallis.co.uk



neil wallis media limited

UK public still believes in climate change

Pidgeon refuts the possibility that this may have been caused by the scandal earlier this year when emails between University of East Anglia scientists ...

Preece Alan Mr (MAC)

Sent:

23 June 2010 08:42

To:

Edward Acton (VCO); Neil Wallis; Trevor Davies (VCO) Lisa Williams (VCO); Annie Ogden (ARM)

Cc;

Subject:

RE: University of East Anglia

Dear All

It was a Jonathan Leake article - you can find it if you click on the blue 'formal apology' link in the article below and then go to 'original article'. Or even quicker go to

http://www.damtp.cam.ac.uk/user/jone/pub/cc/pcc-st/Leake and North original S Times article 31 Jan 2010.pdf

Regards

Alan

Alan Preece Director of Marketing and Communications University of East Anglia 01603 593015

Supporting the Norwich bid to become UK City of Culture 2013

2009 "What Uni" Student Choice Award winner and 3rd amongst mainstream English universities in the National Student Survey

World top 200, European top 100, UK top 20 (Guardian League Table 2010)

Norwich: fourth highest cited UK city for science, thanks to the University and our Norwich Research Park partners.

From: Acton Edward Prof (VCO)

Sent: Tuesday, June 22, 2010 10:50 PM To: Neil Wallis; Davies Trevor Prof (ENV)

Cc: Williams Lisa Ms (VCO); Ogden Annie Ms (MAC); Preece Alan Mr (MAC)

Subject: RE: University of East Anglia

Yeas, I found it v interesting. And approach to reports in Telegraph et al striking. Interested in Sunday Times retractions and apologies. Who was the journalist I wonder

Best

Edward

You folks read this stuff below? interesting.

Neil

Neil Wallis

Neil Wallis Media Limited

07710 664144

neil@neilwallis.co.uk



Scientific American

<u>Experto Crede: Climate Expertise Lacking among Global Warming Contrarians</u>

Scientific American
... that would undermine the climate change consensus and point to e-mails stolen from the University of East Anglia in England—so-called "Climategate ...

Neil Wallis [nell.wallis@outside-org.co.uk]

Sent:

28 September 2010 12:05

To:

Edward Acton (VCO) Trevor Davies (VCO)

Cç; Subject:

Dinner

Hi Edward!

Hope you

are all well?

Just wondering if your kind offer of dinner at the Vice-Chancellor's residence is still operational for tomorrow?

Lwondered if someone could remind me of the arrangements - I think you kindly invited

to stay overnight? When would be a reasonable time to arrive - I've got meetings in London in the morning but will travel up in the afternoon?

Very best wishes,

Neil

Neil Wallis || Senior Consultant The Outside Organisation Ltd Butler House 177-178 Tottenham Court Road London W1T 7NY

T: +44 (0)20 7436 3633 F: + 44 (0)20 7462 2910 M: +44 (0)7710 664144

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From: Sent: nell@neilwallis.co.uk .30 August 2010 10:55

To: Subject: Edward Aoton (VCO) Re: 29 September

Dear Edward,

I have actually already accepted this lovely invitation via an email to Katie. I must say it would be delightful and I to stay again at Wood Hall, if that is OK.

I'm really looking forward to it!

Best Regards,

Neil

Sent from my BlackBerry® wireless device

From: "Acton Edward Prof (VCO)" < E.Acton@uea.ac.uk>

Date: Mon, 30 Aug 2010 10:08:23 +0100 To: Neil Wallisneil@neilwallis.co.uk

Subject: 29 September.

Dear Nell

I hope you are able to join us for the do on Wednesday 29 September? And it would be very nice to have you to stay at Wood Hall that night should it suit you.

Best wishes

Edward