Submission to UEA Climate Research Unit Enquiry

Background

My name is David Archer. I am a hydrologist by profession. I have worked in academia (University of Newcastle) in Northumbrian Water and National Rivers Authority, and in consultancy. I have worked in development environments in Asia and Africa for 12 years. I have published over 50 academic papers in national and international journals and two books. The subjects of the research have included climate change and related impacts on river flow mainly in the Upper Indus Basin at the western end of the Himalaya-Karakoram-Hindu Kush but I have also researched climate change in Africa. Whilst of retirement age, I continue research of personal interest on an honorary basis with the School of Civil Engineering and Geomatics at the University of Newcastle where I am a Visiting Research Fellow. My main colleague there is Dr Hayley Fowler who is a reader in that Department.

I first met Dr Phil Jones whilst we were colleagues and friends at the University of Newcastle in the early 1970s where I was a Research Associate and Dr Jones was carrying out his PhD research. Since that time I have met him only very infrequently and briefly at conferences. My colleague Dr Hayley Fowler whose main research interest is climate change has had more contact with Dr Jones and has liaised with him on several projects of mutual interest.

Basis for Submission

In 2003 and 2004, Dr Fowler and I prepared a research paper on climate change, particularly changes in seasonal temperature in the Upper Indus Basin based on station data stretching from the western end of the Himalaya through the Karakoram to the Hindu Kush. Whilst the paper provided evidence to support an annual upward trend in temperature, it also contained evidence that contrary to our own and other perception that summer temperature which is critical for glacier melt and the status of glacier mass balance had actually fallen over a recent 40 year period and that in line with this a high level tributary of the River Indus, the River Hunza, had shown a downward trend in summer river flow. We submitted this paper to the primary international climate journal, the Journal of Climate in June 2004, with the recognition that such material could provide some scope for sceptics to use or misuse (as in fact they subsequently did). The paper was rejected for publication in October 2004 but, believing that the research was of a high standard and the results of general interest we asked Phil Jones to review the paper and tell us his opinion of the paper.

After review Phil Jones' email (Appendix 1) simply says that he would have accepted the paper. He makes some suggestions as to how the presentation could be improved but makes no remark on the observation of falling summer temperatures or no indication that such material should be modified or withheld. In our letter of resubmission to the Journal of Climate we used Phil Jones support (in view of his international standing) to lend credibility to the paper. We resubmitted the paper in early December 2004 and for unknown reasons the paper was lost by the editors until we enquired of the progress of the review in June 2005, when we were required to resubmit. The paper was eventually accepted for publication in December 2005 and published in the Journal of Climate in 2006 as 'Conflicting Signals of Climatic Change in the Upper Indus Basin' Vol. 19 p. 4276-4293.

The paper provided an early source of information that climate change and the resulting glaciological and hydrological responses were diverse across the Himalayan massif and that the (by

then perception of) rapid demise of glaciers was by no means universally true. At no time in the exchange either in writing or verbally did Dr Phil Jones indicate any wish to modify or edit our scientific conclusions with respect to temperature trends.

Whilst carrying out this research we referred to a paper for which Phil Jones was a co author, namely, Cook, E. R., P. J. Krusic, and P. D. Jones, 2003: Dendroclimatic signals in long tree-ring chronologies from the Himalayas of Nepal. Int. J. Climatol., 23, 707–732. This paper apart from its dendrochronological analysis reanalyses the temperature record for Kathmandu which had previously been studied by Shrestha et al who derived a consistent upward trend in summer temperatures (June to September) for the period 1977–94, but using maximum temperatures only. Cook et al. (2003) reexamined a longer Kathmandu mean temperature record and compared it with a 0.5° latitude–longitude gridded dataset based on records from neighboring northern India; both showed a cooling trend in the monsoon (June to September) as well as in premonsoon (February to May) for the period 1901–95.

Again there is no evidence that any attempt was made to conceal evidence contrary to global or local perceptions of warming trends in temperature.

I would be grateful if you will accept the above submission in relation to your current enquiry.

Your sincerely

David Archer

Visiting Research Fellow, Newcastle University.

Appendix 1

Email from Phil Jones relating to review of the paper for Journal of Climate

Original Message-----

> From: Phil Jones

> Sent: 26 November 2004 08:52

> To: H J Fowler

> Subject: RE: Re: [Fwd: SWURVE paper 5 for HESS]

Hayley,

pdf attached.

As for the Indus paper, I would resubmit. I would have accepted it. I would change a few things.

1. Split the first para after Thorne et al. 2003. Say just 1998 warmest year as 2003 is equal with 2002. Did I come up with +/- 0.2 as an error?

2. Himalaya is a plural noun as well, I think. Just say the western Himalaya, for example.

3. Pt 4 in section 3 needs justification. I don't think it is right. I would think r-values for July for example should be lower than JJA. It would be better if you used J, J and A together and then compared with JJA, but you are upping the r-value by using the seasonal cycle. Need to prove the result if it is the former.

4. In 4 should be Jones and Moberg (2003), not ...Mann (2003)

5. Stress Karl et al (1993) and Easterling et al (1997) only used data since 1950, so your point re 1900-35 isn't a fair comparison with Karl's work.

6. Attaching the Kathmandu series that Cook used and some notes, in case you want to add these. They are a distance away though. Site had problems of homogeneity after 1992.

You could add my name to the acknowledgements with Chris if you think that might help.

Can you send me the revised version as I'd like to send to the 2 organizers of the meeting we're having on extremes for S. Asia? One is Tom Peterson and the other Rupa Kumar Kolli in Pune.

Cheers

Phil

Appendix 2 Email sequence relating to resubmission of the paper to Journal of climate

From: Martin Hoerling
Sent: 01 December 2004 18:06
To: H J Fowler
Subject: RE: JCL-5134 Decision

Dear Hayley,

To re-submit, simply follow the original submittal process, in which the paperis sent to the Chief Editor's desk as a new manuscript.

best regards,

marty

Dear Martin

I wish to resubmit the paper "Conflicting signals of climatic change in the Upper Indus basin" (JCL-5134) by H. Fowler and D. Archer. The paper has been extensively revised according to the reviewers extremely helpful comments. I have also forwarded the paper to Phil Jones at the Climatic Research Unit, University of East Anglia, and he feels that it is now of a suitable quality for publication in the Journal of Climate.

Should I resubmit a revised version to you with reference to how the reviewers' comments have been addressed or do I need to resubmit the paper as a new paper online?

Regards

Hayley

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Dr. Hayley Fowler
Senior Research Associate
Water Resource Systems Research Laboratory
School of Civil Engineering and Geosciences
Cassie Building
University of Newcastle
Newcastle upon Tyne
NE1 7RU

From: Barb Deluisi
Sent: 15 October 2004 21:42
To: h.j.fowler
Cc: martin.hoerling; Cindy Carrick
Subject: JCL-5134 Decision

Dear Dr. Fowler,

I am now in receipt of the reviews of your paper entitled, "Conflicting signals of climatic change in the Upper Indus basin" (JCL-5134) by H. Fowler and D. Archer. On the basis of these reviews and my own evaluation, I am sorry to inform you that the paper is rejected for publication in the *Journal of Climate*. Both reviewers point to the lack of rigor in explaining the possible origins for the reported temperature trends, lending the paper a substantial air of speculation. The reviewers do note, however, the value of the data itself regarding the time series over the Upper Indus Basin. The reviewer comments are most constructive, very thorough, and I believe may help you should you elect to submit a new paper in the future.

Sincerely,

Martin P. Hoerling
Editor

Marty Hoerling
NOAA-CIRES Climate Diagnostics Center