

From: Keith Briffa <k.briffa@uea.ac.uk>
To: "Folland, Chris" <ckfolland@meto.gov.uk>, 'Phil Jones' <p.jones@uea.ac.uk>, "Michael E. Mann" <mann@multiproxy.evsc.virginia.edu>
Subject: RE: IPCC revisions
Date: Wed Sep 22 16:19:06 1999
Cc: tkarl@ncdc.noaa.gov

Hi everyone

Let me say that I don't mind what you put in the policy makers summary if there is a general consensus. However some general discussion would be valuable . First , like Phil , I think that the supposed separation of the tree-ring reconstruction from the others on the grounds that it is not a true "multi-proxy" series is hard to justify. What is true is that these particular tree-ring data best represent SUMMER temperatures mostly at the northern boreal forest regions. By virtue of this , they also definately share significant variance with Northern Hemisphere land and land and marine ANNUAL temperatures - but at decadal and multidecadal timescales - simply by virtue of the fact that these series correlated with the former at these timescales. The multi proxy series (Mann et al . Jones et al) supposedly represent annual and summer seasons respectively, and both contain large proportions of tree-ring input. The latest tree-ring density curve (i.e. our data that have been processed to retain low frequency information) shows more similarity to the other two series- as do a number of other lower resolution data (Bradley et al, Peck et al ., and new Crowley series - see our recent Science piece) whether this represents 'TRUTH' however is a difficult problem. I know Mike thinks his series is the 'best' and he might be right - but he may also be too dismissive of other data and possibly over confident in his (or should I say his use of other's). After all, the early (pre-instrumental) data are much less reliable as indicators of global temperature than is apparent in modern calibrations that include them and when we don't know the precise role of particular proxies in the earlier portions of reconstruction it remains problematic to assign genuine confidence limits at multidecadal and longer timescales. I still contend that multiple regression against the recent very trendy global mean series is potentially dangerous. You could calibrate the proxies to any number of seasons , regardless of their true optimum response . Not for a moment am I saying that the tree-ring , or any other proxy data, are better than Mike's series - indeed I am saying that the various reconstructions are not independent but that they likely contribute more information about reality together than they do alone. I do believe , that it should not be taken as read that Mike's series (or Jone's et al. for that matter) is THE CORRECT ONE. I prefer a Figure that shows a multitude of reconstructions (e.g similar to that in my Science piece). Incidentally, arguing that any particular series is probably better on the basis of what we now about glaciers or solar output is flaky indeed. Glacier mass balance is driven by the difference mainly in winter accumulation and summer ablation , filtered in a complex non-linear way to give variously lagged tongue advance/retreat .Simple inference on the precidence of modern day snout positions does not translate easily into absolute (or relative) temperature levels now or in the past. Similarly, I don't see that we are able to substantiate the veracity of different temperature reconstructions through reference to Solar forcing theories without making assumptions on the effectiveness of (seasonally specific) long-term insolation changes in different parts of the globe and the contribution of solar forcing to the observed 20th century warming .

There is still a potential problem with non-linear responses in the very recent period of some biological proxies (or perhaps a fertilisation through high CO2 or nitrate input) . I know there is pressure to present a nice tidy story as regards 'apparent unprecedented warming in a thousand years or more in the proxy data' but in reality the situation is not quite so simple. We don't have a lot of proxies that come right up to date and those that do (at least a significant number of tree proxies) some unexpected changes in response that do not match the recent warming. I do not think it wise that this issue be ignored in the chapter.

For the record, I do believe that the proxy data do show unusually warm conditions in recent decades. I am not sure that this unusual warming is so clear in the summer responsive data. I believe that the recent warmth was probably matched about 1000 years ago. I do not believe that global mean annual temperatures have simply cooled progressively over thousands of years as Mike appears to and I contend that that there is strong evidence for major changes in climate over the Holocene (not Milankovich) that require explanation and that could represent part of the current or future background variability of our climate. I think the Venice meeting will be a good place to air these issues.

Finally I appologise for this rather self-indulgent ramble, but I thought I may as well voice these points to you . I too would be happy to go through the recent draft of the chapter when it becomes available.

cheers to all

Keith

At 01:07 PM 9/22/99 +0100, Folland, Chris wrote:
>Dear All

>
>A proxy diagram of temperature change is a clear favourite for the Policy
>Makers summary. But the current diagram with the tree ring only data
>somewhat contradicts the multiproxy curve and dilutes the message rather
>significantly. We want the truth. Mike thinks it lies nearer his result
>(which seems in accord with what we know about worldwide mountain glaciers
>and, less clearly, suspect about solar variations). The tree ring results
>may still suffer from lack of multicentury time scale variance. This is
>probably the most important issue to resolve in Chapter 2 at present.

>
>Chris

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>> -----Original Message-----
>> From: Phil Jones [SMTP:p.jones@uea.ac.uk]
>> Sent: 22 September 1999 12:58
>> To: Michael E. Mann; k.briffa@uea.ac.uk
>> Cc: ckfolland@meto.gov.uk; tkarl@ncdc.noaa.gov
>> Subject: Re: IPCC revisions

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>>
>> Mike,
>> Been away in Japan the last week or so. Malcolm was there in a
>> wheelchair
>> because of his ruptured achilles. We both mentioned the lack of evidence
>> for global scale change related to the MWE and LIA, but all the later
>> Japanese speakers kept saying the same old things.

>> As for the TAR Chap 2 it seems somewhat arbitrary division to exclude
>> the
>> tree-ring only reconstructions. Keith's reconstruction is of a different
>> character to other tree-ring work as it is as 'hemispheric in scale' as
>> possible so is unlike any other tree-ring related work that is reported
>> upon.

>> If we go as is suggested then there would be two diagrams - one simpler
>> one with just Mann et al and Jones et al and in another section Briffa et
>> al. This might make it somewhat awkward for the reader trying to put them
>> into context.

>> The most important bit of the proxy section is the general discussion
>> of
>> 'Was there an MWE and a LIA' drawing all the strands together. Keith and
>> I
>> would be happy to look through any revisions of the section if there is
>> time.

>>
>> One other thing, did you bring up the possibility of having a
>> proxy-only
>> chapter (albeit short) for the next assessment ?

>>
>> On Venice I suggested to Peck that you and Keith give talks on the
>> reconstructions - frank and honest etc emphasising issues and I lead a
>> discussion with you both and the rest of those there where the issues
>> can be addressed (ie I would like to get the views of other proxy types
>> and
>> the modellers/detectors there). I suggested to Peck that this was early
>> in the week as I have to leave on the Thursday to go to the last day of
>> a Working Group meeting of the Climate Change Detection group in Geneva
>> (a joint WMO Commission for Climatology/CLIVAR). I hope to report on the
>> main findings of the Venice meeting.

>>
>> Another issue I would like to raise is availability of all the series
>> you use in your reconstructions. That old chestnut again !

>>
>> How is life in Charlottesville ? Do you ever bump into Michaels or is
>> always off giving skeptical talks ?

>>
>> Tim Osborn is making great progress with his NERC grant and will be
>> looking
>> into dates soon for coming to see you.

>>

>> Cheers

>> Phil

>>

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>> Prof. Phil Jones

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