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22 January 2008

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Subject: Future of IPCC

Comments on the discussion paper about the future of the IPCC, including its structure, work programme and main products.

From: Kevin E Trenberth, CLA WG I AR4, and Head Climate Analysis Section, NCAR

IPCC has indeed been very successful. Within WG I we have seen a progression of statements about increasing confidence that we have detected and attributed observed climate change to human influences. On that topic we are at a point of diminishing returns and little further seems to be gained from more of the same. Therefore I agree with item 2.1 that we should be looking for some real major changes in IPCC.

Having unequivocally determined that climate change is happening and it is very likely due to humans, there is an enormous need to move on to address adaption to the inevitable climate change that is coming. This also means that we must switch from projections to predictions of climate. The main difference is the need to initialize models to the observed state. To me, this means some substantial changes in IPCC are in order. First and foremost, a substantial part of WG I activities ought to be “operationalized” and become more routine and more frequent. Maybe this does not happen under IPCC and a handoff procedure is required to GEOSS or some other entity? It probably could not happen under the same rules.

The concept for this is to build a “**climate information system**”, as outlined in my recent article in the January 2008 *WMO Bulletin* (available at <http://www.cgd.ucar.edu/cas/Trenberth/trenberth.papers/WMO-BullJan08.pdf>). As outlined there in Figure 2, this relates to the flow of information and technology transfer from basic research, to operational research, to climate services. This relates very much to linking changes in the physical system to impacts, vulnerability and adaptation issues that are the domain of WG II and it also relates to the sustainable development issues raised by

the Chairman in the discussion paper. It suggests that a component of WG II is similarly tied into this operational system whereby it assesses impacts in near real time and why they have happened, and provides ongoing information to decision makers, stakeholders and users. It is directly related to item 3.2 on the need for regional aspects of climate change (e.g., see Fig 1 of my article). I do not agree with the change in emphasis to more economic aspects, however. The economics aspects must be balanced by resource, environmental and sustainability aspects. Instead, missing altogether from the Chairman's draft is the need to initialize models and produce climate predictions on multiple time scales, but especially for up to about 3 decades ahead. See the article for details.

If there is any progress toward the above, then the nature of AR5 certainly changes substantially. However, I would hate for the heritage IPCC has established to be lost. It would suggest that something closer to the current synthesis report would be needed rather than the full WG I and II reports, as much of the latter would be assessed in nearer to real time.

Therefore, I am arguing against a major comprehensive assessment every 6 years or so as we can not wait that long for information as climate changes. It also means a transition away from a pure assessment activity of research to an assessment of analyses and predictions that become more routine in many countries. Hopefully these can be done with integrity and procedures developed in IPCC. I am not sure that special reports fill the need. The organizational issues would have to follow the above changes. The considerations I have raised here really go beyond what IPCC has done in the past, and so can not be decided solely by IPCC. But the governments involved have the capacity to bring in these other aspects.

I hope you will consider these suggestions in modifying the way forward for IPCC.