

25 January 07: Drought WG Telecon. – notes

Dialing instructions:

- 1) Dial 1-800-516-9896 or 1-816-650-0725
- 2) At the prompt enter 8885044

Agenda:

Announcements/pressing issues:

Old business: review paper, datasets, reference list

New business: definition of drought for WG purposes

Announcements/pressing issues:

It was decided that the Drought WG will meet immediately after the US CLIVAR Summit in Annapolis Maryland. The summit dates are 23-25 July. **We will meet on July 26. Agenda is TBD.**

The U.S. CLIVAR DRought In Coupled Models Project (DRICOMP) project was recently announced. The U.S. CLIVAR Project Office is coordinating this activity to provide support for research into the physical and dynamical mechanisms leading to drought and the mechanisms through which drought may change as climate changes. Proposals should be sent INFORMALLY by email (PDF format) to Cathy Stephens, at the U.S. CLIVAR Office, dricomp@usclivar.org, by no later than 5 pm EDT, March 15, 2007. DO NOT SUBMIT THE PROPOSAL TO A FUNDING AGENCY AT THIS TIME. Successful PIs will be contacted by the funding agencies on May15, 2007. The full proposal announcement and specifics can be found on the US CLIVAR website at: www.usclivar.org/DRICOMP-AO.html **We will need to coordinate with this activity – both our work and that of the DRICOMP PIs will hopefully culminate in a workshop sometime in 2008.**

Kingtse Mo mentioned that the next NOAA Climate Test Bed (CTB) FY08 Federal Funding Opportunity is likely to include a focus on drought.

Cathy Stephens created the following email alias should you want to send mail to the members of the working group drought-wg@usclivar.org

Old business: review paper, datasets, reference list

If you haven't already done so, please take some time to send Sumant any information you have regarding relevant observational datasets, and send Ning your list of favorite drought references. We are also compiling a list of relevant model datasets (send your

input to Phil Pegion). This will be an important step in determining what further runs we should do.

Victor Magana is involved in a project that has prepared a monthly precipitation data base with quality controls for Mexican data (more than 3000 stations over Mexico, Central America and the Caribbean). They hope to be able to expand the instrumental record and data base for the entire XX century. Victor will make a presentation of that work at the next telecon.

Dave will continue work on the drought review paper – he plans to send to the WG the latest version of the outline of the paper some time next week.

New business: definition of drought for WG purposes

Randy Koster presented some work on identifying multi-year periods of precipitation deficits (or surpluses) over land from the observational record (pdf file is available at - <http://www.usclivar.org/Organization/drought-wg.html>) The results show that there only a few regions in the world where the extended periods of precipitation deficits are statistically distinguishable from a random juxtaposition of years. Furthermore, those regions generally coincided with regions that have a significant correlation with SST variations. There is an interesting asymmetry between wet and dry years. It seems that extended periods of wet conditions are less likely than extended periods of dry years.

The work generated considerable discussion. Issues that came up included:

- Reasons for differences between wet and dry periods (differences in land-atmosphere feedbacks?)

- Gridded data masks data inhomogeneities (e.g., some grid points may include very few stations) –need to look at the original station data.

- Need to look further at results from model runs (differences between individual members in the ensemble, land versus ocean)

- This work should help motivate future model runs

Dave Gutzler started the discussion on the definition of drought. Issues that came up include:

- Should we start by looking at annual means or take seasonality into account? (sentiment seemed to be to start simple – annual means)

- Much discussion on what quantities to include (beyond precipitation). E.g., temperature. Also net radiation (drives loss of water) – difficulties when looking at historical droughts (no data). Streamflow – need to document datasets.

- We will almost certainly have to rely on some model-derived quantities (e.g., soil moisture from LDAS – Ken Mitchell's group).

- Do we also consider floods? Different phenomenon from droughts (time scale dependence, mechanisms etc.)

Dave will form a small group to take a first cut at developing a working definition of drought. Please send email to Dave if you are interested in participating in that activity.