

January 22, 2007

U.S. CLIVAR DRought In Coupled Models Project (DRICOMP)

The U.S. CLIVAR Project Office is coordinating a new 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. This new program, Drought in Coupled Models Project (DRICOMP), focuses on evaluation of a variety of existing model products to address issues such as the roles of the oceans and the seasonal cycle in drought, the impacts of drought on water availability, and distinctions between drought and drying. Several CLIVAR and Climate Change Science Program agencies, NSF, NOAA, NASA, and DOE, plan, subject to the availability of funds, to support 15-20 one-year awards at \$30,000 as supplements or small grants to PIs for this research. PIs may propose to analyze and evaluate unforced control runs archived as part of the WCRP CMIP3 multi-model dataset at the PCMDI, as well as the multi-model simulations of 20th-century climate and the long stabilized simulations with forcing held fixed at future climate conditions. Additional sets of model output are also appropriate objects for DRICOMP-supported analyses. These include: the PMIP paleo-climate simulations of the last glacial maximum; the downscaled high resolution model datasets that are part of the North American Regional Climate Assessment Program (NARCAP) and the Prediction of Regional scenarios and Uncertainties for Defining European Climate change risks and Effects (PRUDENCE); the coupled model seasonal hindcasts carried out under the Seasonal Prediction Model Intercomparison Project (SMIP2/HFP) and the Development of a European Multimodel Ensemble for Seasonal to Interannual Prediction (DEMETER) project.

The objective of DRICOMP is to increase community-wide diagnostic research into the physical mechanisms of drought and to evaluate its simulation in current models. DRICOMP will lead to more robust evaluations of model projections of drought risk and severity, and thus to a better quantification of the uncertainty in such projections.

Coupled global model simulations are available from roughly fourteen modeling groups worldwide, including, for the U.S., NCAR, GFDL and GISS. These U.S. Centers and the funding agencies invite climate scientists to propose diagnostic studies to use existing observational datasets to diagnose and evaluate the simulations for the occurrence and mechanisms of drought. Model output and selected observational data sets for the research are available from PCMDI and elsewhere (see Table 1). The research to be funded is expected to commence in September 2007. Successful PIs will be expected to participate in and discuss their results at a workshop to be convened in spring 2008.

DRICOMP follows the highly successful CMEP (Coupled Model Evaluation Project - <http://www.usclivar.org/science.html>) that supported more than 20 projects, the results of which were presented at an international workshop in March 2005 and subsequently in more than 25 journal articles.

Eligibility

Any investigator from a U.S. institution, government, or non-government, is eligible, except those from any of the four participating centers: NCAR, GFDL, GISS, and PCMDI. Collaboration with principal scientists in these centers is encouraged. However, funding for PIs in these centers (if required) is outside this competition and is not guaranteed. PIs from the centers should contact program managers from their respective agencies for guidance.

Proposals

Proposals must be responsive to the objective and goals outlined above.
The proposals must include

- a. A project summary 1 page or less
- b. Project description 5 pages, including a work plan and time line, figures and references,
- c. Budget
- d. CV(s)

The five-page project description should focus on what will be done and how, rather than general background science.

Budgets must be no more than \$30,000 (except under extraordinary circumstances that must be justified). Travel funds for the spring 2008 workshop should not be included in the proposal budget; they will be provided separately. At least one U.S. modeling center's simulations must be analyzed. More than one is strongly encouraged.

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 May 15, 2007.

Review

The proposals will be reviewed by representative from the US CLIVAR science panels and from the NCAR (CCSM), GFDL, GISS and PCMDI centers. The resulting recommendations will be provided to the funding agencies for their funding deliberations.

Schedule

- Informal proposals due by March 15, 2007. Please transmit as a PDF file.

Informal proposals refer to scientific content without authorized signatures and forms.

- Successful PIs informed by May 15, 2007
- Formal proposals submitted by June 1, 2007

** Formal proposals will require all authorized signatures and NSF forms. The scientific content should remain the same as in the informal proposals. **

- Grants awarded in early September 2007.

Procedural questions should be addressed to Cathy Stephens at dricomp@usclivar.org. Scientific questions should be addressed to Walter Robinson (wrobins@nsf.gov)

Table 1. Links to climate model information and products for DRICOMP projects.

Model Project	URL (General Information and links to data)
PMIP	http://www-lsce.cea.fr/pmip2/
SMIP	http://grads.iges.org/ellfb/SMIP2/smip.top.html http://ingrid.ldeo.columbia.edu/SOURCES/.WCRP/.SMIP-2/overview.html
CMIP	http://www-pcmdi.llnl.gov/projects/cmip/index.php https://esg.llnl.gov:8443/index.jsp
PRUDENCE	http://prudence.dmi.dk/
DEMETER	http://www.ecmwf.int/research/demeter/data/index.html
NARCCAP	http://www.narccap.ucar.edu (archive under development)