



Call for New U.S. CLIVAR Working Groups September 1, 2011

This document describes the aims and successes of the U.S. Climate Variability and Predictability (CLIVAR) Working Groups (WGs), specifies how WGs are established and governed, and invites the U.S. climate science community to develop prospectuses for new ones starting January, 2012.

Aims

The U.S. CLIVAR program annually establishes new limited-lifetime action-oriented WGs of scientists (typically ~8-12 persons) to coordinate and implement focused activities for the benefit of the scientific community. A major aim of the WGs is to expedite coordinated efforts towards specific scientific activities and objectives, for example: assessing existing or developing new data and modeling products and capabilities, leading community-wide analyses or syntheses of current state of understanding, and/or developing scientific and implementation recommendations on specific subjects for further consideration by U.S. CLIVAR Panels and supporting agencies. Furthermore, WGs should foster wider support of, and participation in, activities addressing critical scientific challenges and/or CLIVAR needs. WGs may also serve to facilitate joint activities between U.S. CLIVAR and other national and/or international programs.

Prior Working Groups

U.S. CLIVAR has initiated eight WGs over the past six years:

Hurricane Working Group
Greenland Ice Sheet Ocean Interaction Working Group
Decadal Predictability Working Group
High Latitude Surface Flux Working Group (completed)
Western Boundary Current Working Group (completed)
Drought Working Group (completed)
Madden-Julian Oscillation (MJO) Working Group (completed)
Salinity Working Group (completed)

The WGs have been highly successful in carrying out a variety of productive and remarkably effective activities. For example, they:

- Salinity WG: Organized a community workshop, developed a concluding report, and published articles articulating the role of ocean salinity in the global climate system, examining the processes and mechanisms that link salinity, the water cycle, ocean circulation, and climate variability; promoting understanding of trends and variability of sea surface salinity and subsurface salinity for different regions; identifying the relationship between salinity and temperature structure and variability; and determining

the observations and monitoring requirements necessary to ensure adequate salinity data products for future climate studies.

- MJO WG: Developed simulation metrics/diagnostics for the MJO and engaged the modeling community to adopt and apply these diagnostics in an intercomparison framework resulting in two refereed WG publications; results hold promise for guiding future model testing and improvement as well as increased sub-seasonal forecast skill.
- Drought WG: Designed, coordinated, and carried out community modeling experiments to characterize the sensitivity of climate models to ocean and land-surface forcings in order to assess mechanisms important for regional drought and its prediction; organized a workshop and a special issue of *J. Climate* on drought mechanisms, predictability and prediction
- Western Boundary Current WG: Brought together field experimentalists, modelers, and observationalists investigating the western boundary current regions to identify shortcomings in the atmosphere, ocean, and coupled models that need to be addressed to accurately model western boundary current atmosphere-ocean interaction; organized a workshop resulting in a special issue of *J. Climate* on the dynamics of western boundary current regions and their role in climate
- High Latitude Surface Flux WG: Investigated the current state of knowledge regarding high-latitude fluxes over water, ice, and ice-water mixtures and convened a workshop on oceanic surface fluxes, resulting in a summary paper to appear in *BAMS*. The paper identifies the current problems in the three environments and discusses several ways forward, including issues in parameterization, the need for specific in situ observations, and several approaches to enhance satellite derived surface turbulent fluxes.
- Decadal Predictability WG: Published a *BAMS* article describing existing methodologies to separate decadal natural variability from anthropogenically forced variability, the degree to which such efforts have succeeded, and the ways in which the methods are limited or challenged by existing data; developed an online tool for supporting discussion of verification metrics toward the development of a verification framework for decadal hindcasts to be published for use in evaluating CMIP5 simulations

Previous WGs have impacts extending beyond the conclusion of their funded lifetimes; each galvanizing a *community* of researchers to further advance scientific exploration (e.g., the MJO WG gave rise to an international World Climate Research Programme (WCRP) task force which in turn has organized a 2011 field experiment on MJO initiation; the Drought WG expanded into an international WCRP Drought Interest Group to identify strategic research needs in drought prediction and encourage increased coordination of regional and international drought-research activities; the Salinity WG Report contributed to the design of an international process study and 2012-13 field experiment to examine the mechanisms controlling the upper ocean salinity budget). *Thus the scope, aims, types of activities, and organization of the completed WGs should serve as the basis for follow-on community activities nationally and internationally.*

Description and Governance

WGs have in common the following characteristics. They:

- Assemble a team of ~8-12 scientists to undertake the work (international ‘contributing member’ participation is permitted)

- Develop and implement a work plan describing expected activities, milestones, support needs, and anticipated benefits to the CLIVAR program and to the climate research community
- Undertake specific tasks that are both achievable and measurable within a two year lifetime
- Produce a range of material for inclusion on CLIVAR web sites, and/or published in journals, newsletters, or as CLIVAR reports
- Publicize and routinely report on WG activities to the U.S. CLIVAR Panels (and to the CLIVAR Inter-Agency Group (IAG) and other groups as appropriate)
- Encourage community-wide participation whenever possible through open workshops, web pages, and email lists
- Link with one or more U.S. CLIVAR Panels to facilitate planning of the U.S. CLIVAR Program and enable annual review of the WG progress

In order to develop a linkage with the U. S. CLIVAR Panel(s), proposers of a WG should contact and consult with the current chairs of the appropriate Panel(s). Panel mission statements and membership lists can be found under the ‘Organization’ dropdown menu at usclivar.org.

WGs may be formed jointly with other national and international programs (e.g., U.S. Carbon Cycle Science Program, Global Energy and Water Cycle Experiment). In such cases the U.S. CLIVAR Office (USCO) should be consulted regarding programmatic cooperation.

NOTE: A separate announcement inviting joint U.S. CLIVAR/Ocean Carbon and Biogeochemistry WG prospectuses is being released concurrently with this call.

The U.S. CLIVAR Scientific Steering Committee (SSC) reviews and approves, in consultation with the IAG, all requests for new WGs. When approved, WGs are supported and administered through the USCO.

The SSC, in consultation with the US funding agencies that support US CLIVAR, must approve the membership of the WG. The SSC considers the suggested membership described in the prospectus, but reserves the option of soliciting and appointing WG members from the broader community. It is recommended that those leading the development of a prospectus not notify prospective WG members until after the proposed WG has been approved and membership has been reviewed and confirmed with the SSC.

Membership of non-US scientists is welcome, but should be limited. Such ‘contributing members’ may participate fully in the activities of the WG. However, travel support to non-US members to attend WG meetings and/or workshops is not provided.

The SSC and its Panels will assess progress of WGs on an annual basis during the annual U.S. CLIVAR Summit held each summer. WG chairs should be prepared to arrange for a briefing of appropriate Panels during the Summit.

The USCO and IAG consider requests for financial support of WG meetings, teleconferences, and WG reports (copies and distribution). Support of a small to modest-sized open science workshop organized by the WG can also be included (such support includes typical workshop-related costs, but only very limited travel funds). Up to \$25K per year for two years is provided to support the activities of each WG.

WGs should focus on utilizing and maximizing efficient use of existing or expected resources. At this time, most agencies are **not** seeking recommendations for activities requiring new agency resources. WGs will not be formed to explicitly develop proposals for consideration by research agencies. WGs are also not intended to be a mechanism to seek support for workshops that provide little or no linkage to CLIVAR planning or implementation.

Submission of Prospectuses for New Working Groups

Each prospective new WG that seeks support must develop and submit a prospectus. The prospectus should be limited to five pages and address the following:

- Motivation: What is the motivation for the WG? Why establish a WG now?
- Tasks: What are the proposed specific tasks (these must be measurable and attainable), the timeline of activities (including appropriate milestones), and anticipated outcomes and benefits to U.S. CLIVAR (describing links to appropriate Panel goals, USGCRP goals, and agency programs)?
- Publications and Outreach: What plans does the WG have for producing and publishing material suitable for U.S. CLIVAR web sites, journals, newsletters, or as U.S. CLIVAR reports?
- Reporting: How and to which U.S. CLIVAR Panels will the WG report?
- Leadership and Suggested Membership: Who will co-chair the WG and what complimentary research experience does each co-chair bring? What is the suggested membership of the WG and what expertise does each proposed member provide?
NOTE: WGs are great opportunities for junior scientists. Diversity of membership should also be considered.
- Resource Requirements: What are the activities for which resources are sought: travel, communications, and reporting (e.g. “the WG will meet once per year for 2.5 days, hold monthly teleconferences, organize a 50-participant workshop, and submit for publication a 15-page manuscript”)?

Prospectuses from previous WGs provide good models for developing a new WG prospectus (see <http://www.usclivar.org/Organization.php> for examples). Please contact the USCO (usco@usclivar.org) with any questions regarding the development of a new WG prospectus.

Unless otherwise justified, the start date for new WG activities will be January 2, 2012. WGs should plan to complete their tasks by December 31, 2013.

Electronic copies of a prospectus (in Word, or PDF) for new U.S. CLIVAR WG should be submitted to the U.S. CLIVAR Office (usco@usclivar.org) **no later than October 3, 2011**. No exceptions will be made for submissions past deadline. The U.S. CLIVAR SSC will then consider the requests received and, in consultation with the USCO and the IAG, will respond as rapidly as possible (no later than November 30, 2011) to facilitate the initiation of the approved WGs by January 2, 2012.

There is a limit on the collective funding agency resources available for WGs. Thus, it is likely that not all submitted prospectuses can be supported. The start of up to two new WGs is anticipated through this call.