

US CLIVAR Update

US CLIVAR activities, initiatives, future directions...

VAMOS Panel Meeting July 2010

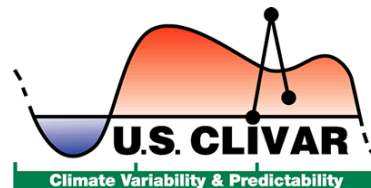
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Quick Update

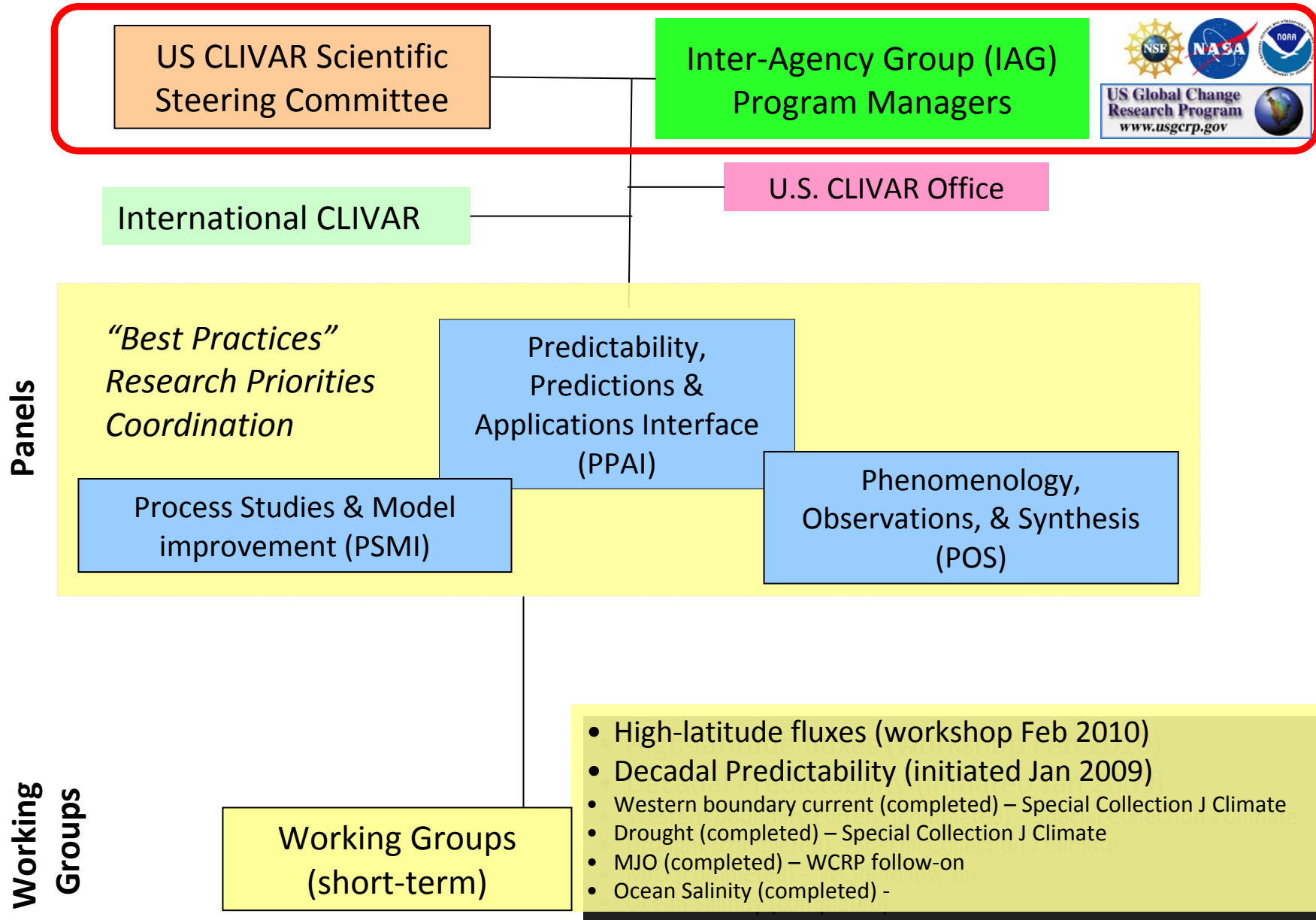
US CLIVAR Recent Achievements

- 4 new **Climate Process Teams** (CPTs) to begin in 2010 (Ocean Boundary Mixing, Cloud Parameterizations (2), Sea Ice/Ocean Mixing)
- Working to have a new **US small-grant program for CMIP5 model analysis** (including those addressing decadal diagnostics)
- FY11 **small grants program (NOAA) for analyzing reanalysis products**
- Several **refereed publications** from Panels and Working Groups
- **Postdocs Applying Climate Expertise** (PACE): 3 new Postdocs
- **DYNAMO** (MJO initiation) & **SPURS** (Ocean salinity) are in proposal stage
- Atlantic MOC activity has grown significantly (now 38 projects) now providing illuminating results, planning for AMOC observing elements in the North subpolar and southern Atlantic oceans underway.
- IESA workshop on track for November 2010

Strategic Planning

- US CLIVAR moving ahead on ***decadal variability and extremes*** themes. CLIVAR ties to *polar regions* is a third core theme - explored at July 2010 Summit.
- Ties to **carbon cycle and ecosystem communities** (will be explored over the next year - challenging).

U.S. CLIVAR Organization



Distinguishing the Roles of Natural and Anthropogenically Forced Decadal Climate Variability: Implications for Prediction

US CLIVAR Decadal Predictability Working Group

Amy Solomon*, Lisa Goddard, Arun Kumar, James Carton, Clara Deser, Ichiro Fukumori, Arthur Greene, Gabriele Hegerl, Ben Kirtman, Yochanan Kushnir, Matthew Newman, Doug Smith, Dan Vimont, Tom Delworth, Jerry Meehl, and Timothy Stockdale

Bulletin of the American Meteorological Society

Submitted November 2009, in revision

Capsule: In decadal forecasts, the magnitude of natural decadal variations may rival that of anthropogenically forced climate change on regional scales. To assess these forecasts, it is necessary to identify what processes contribute to the skill of a decadal prediction and how to distinguish between natural and externally forced variations.

Evaluation of Reanalyses – Developing an Integrated Earth System Analysis (IESA)

Capability ☐ November 1-3, 2010 ☐ Sheraton Hotel, Baltimore, Maryland (Inner Harbor) ☐ Sponsors: NOAA, NASA, NSF, and U.S. CLIVAR
<http://www.usclivar.org/Reanalysis2010.php>

Workshop Objectives

- *Assess strengths and limitations of the new recent U.S. reanalyses and suggest where improvements of reanalysis products can be made*
- *Develop definitions and identify goals of U.S. efforts leading to the forthcoming generation of integrated Earth system analyses (IESA)*
- *Develop diagnostics to quantitatively assess needed improvements in IESA products*
- *Demonstrate applications of reanalyses in climate and weather that would further highlight needed improvements in reanalysis products*

Meeting outline

Day 1: Assessment of the strengths and limitations of the latest reanalyses

Day 2: Towards Integrated Earth System Analysis

Day 3: Applications of the latest reanalysis products

Nov 4-5: Atmospheric Circulation Reconstructions over the Earth (ACRE) Workshop ☐

The concept of this workshop should be of interest for VAMOS

US CLIVAR Summit 2010 Outcomes

- **New US CLIVAR Working Group *Ideas* Some/all to be developed into Working Group “proposals” that will be considered in October 2010**
 - **Hurricanes and the role of SST (sensitivity studies)**
 - High latitude temperature amplification and sea ice variability
 - Arctic weather
 - Arctic freshwater into lower latitude
 - Southern Ocean changes in heat and carbon uptake
 - **Flavors of ENSO – examining frequency and intensity**
 - Upwelling and linkages to climate variability and its implications to ecosystems (polar teleconnections)
 - Real time monitoring and diagnostics of ENSO events using existing ocean synthesis products (using heat content, mixed-layer heat balance)

News from Washington

...Got Services?

- NOAA climate research reorganized into 4-part program: Earth System Science; Obs/Monitoring; Modeling, Analysis, Predictions, projections (MAPP); Climate-Societal Interaction (Jin's presentation)
- NSF released large-valued climate research initiatives on decadal/earth system modeling; water sustainability and climate; ocean acidification; and biodiversity.
- NSF Ocean Observatories Initiative - 25-yr pledge of support.
- NASA preparing for launch of Aquarius (salinity/soil moisture)
- A new US national assessment underway...
- Initial discussions underway towards developing a new USGCRP Strategic Plan...likely to have significant focus on applications and services (e.g. assessments, impacts, adaptation, decision-making, etc)

Remarks for VAMOS Panel

US CLIVAR ties to VAMOS Panel (important!)

- Lisa Goddard is new chair of US CLIVAR
- Paquita is current co-chair of PSMI Panel

US CLIVAR maintaining its interest in extremes (common area of interest)

- Drought an ongoing topic of interest – ties to VAMOS extremes
- Hurricane sensitivity to SST (and other forcings) may be the topic of a US CLIVAR Working Group

IASCLIP

- Paquita can provide update from PSMI Panel point of view
- *An update to US CLIVAR Project Office on IASCLIP planning would be helpful to ascertain if multi-agency support/discussion is warranted*