

2012 U.S. CLIVAR Summit

July 17-20, 2012

Newport Beach, California

Meeting Objectives & Outcomes

Lisa Goddard, SSC Chair

Main Objectives for Summit

- Orientation – provide overview of U.S. CLIVAR and Panel responsibilities
- Panel Business – engage panels to review progress and identify gaps and opportunities
- Science Planning – generate input from panelists on past accomplishments and new science elements supporting each of four program goals

Agenda

- Tues, July 17 (Orientation)
 - Welcome, introductions and program overview
 - Funding agency engagement
 - Science planning overview
 - Initial panel identification of key U.S. CLIVAR deliverables
- Wed, July 18 (Panel Business)
 - Panel reports on 2011 action items
 - Science Team and Working Group reports
 - Panel business breakouts
 - Summit Reception from 5:30-7:00pm

Agenda

- Thur, July 19 (Business and Science Planning)
 - Finish panel breakouts and report to plenary
 - U.S. CLIVAR Themes
 - International CLIVAR update and future directions
 - Science planning breakouts
- Fri, July 20 (Science Planning)
 - Reports from breakouts and discussion of science elements for each goal
 - Schedule for completing new U.S. CLIVAR Science Plan
 - Wrap up by 10:30 a.m.
 - SSC working lunch

Phenomena, Observations and Synthesis (POS) Panel Breakout

- Studies of physical coupled ocean-atmosphere-land phenomena
 - Discussion of AMOC, Decadal, Ice Sheet-Ocean, ENSO, Eastern Tropical Ocean, Southern Ocean, Extremes, TRACE

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- Sustained climate observing system for ocean
 - FOO/GOOS/IOOS (Eric Lindstrom)
 - Ocean state and surface flux estimation (Tony Lee)

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- Regional enhanced monitoring
 - Discussion of AMOC & Greenland Ice Sheet
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 - IASCLIP & SPURS (Joint with PSMI Panel) (Art Douglas & Tom Farrar)
- Synthesis of observations and models
 - Reanalyses (Mike Bosilovich)
 - Climate indices from operational ocean reanalyses (Yan Xue)
 - National Climate Assessment (Joint with PPAI)

Process Study Model Improvement (PSMI) Panel Breakout

- Guide and assess use of process research and obs campaigns to improve parameterization and model development (CPTs)
 - CPT practices and motivating questions
 - 4 current CPTs (Jennifer MacKinnon, Roberto Mechoso, Meibing Jin, Rob Wood)
 - Successes, pitfalls, lessons

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 - Successes, pitfalls, lessons
- Review and coordinate U.S. plans for process studies
 - Post-field Synthesis
 - KESS (Meghan Cronin)
 - CLIMODE (Leif Thomas)
 - VOCALS (Rob Wood)
 - DYNAMO (Chidong Zhang)
 - Ongoing Obs / Pre-field
 - DIMES (Baylor Fox-Kemper)
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- Further develop and consider new process studies
 - AMOC, Greenland Ice Sheet, Eastern Tropical Ocean, Southern Ocean
 - Using new spaceborne measurements of carbon trace gases to constrain physical and chemical processes in climate models (Christian Frankenberg)

Predictability, Predictions and Applications Interface (PPAI) Panel Breakout

- Review and coordinate plans to characterize predictability and demonstrate improved prediction capabilities
 - Status of CMIP5 (Arun Kumar)
 - National Multi-Model Ensemble (Arun Kumar)
 - Extended-range TC forecasting (Joshua Fu)

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 - Nonlinearity in climate responses (**Bruce Anderson**)
 - National Climate Assessment (Joint session with POS Panel)
 - National perspective (**Gregg Garfin**)
 - Agriculture impacts assessment (**Richard Grotjahn**)
 - Climate extremes assessment (**R. Balaji**)
 - SW and NW U.S. regional assessments (**Nick Bond**)
 - How US CLIVAR can contribute to NCA in future

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 - How US CLIVAR can contribute to NCA in future
- Ensure advances in prediction research have appropriate connections and pathways into operational forecast system development
 - U.S. Initiative of Earth System Prediction Capability (**Dan Eleuterio**)

Anticipated Outcomes

- Evaluation of status, gaps, and opportunities
- Specific recommendations and actions items regarding:
 - AMOC Science Team and 8 Working Groups
 - Observing and data systems
 - Reanalyses and ocean state estimation
 - Process studies from field phase through synthesis
 - Successes and lessons from CPTs
 - Coordinated prediction and projection efforts
 - Contributing to the National Climate Assessment
- Assessment of U.S. CLIVAR Themes
- Input for drafting new Science Plan
 - Priority deliverables over past decade
 - Science elements supporting each goal