Quick Update on CLIVAR activities

SSG-19, La Paz, Mexico, 11-14 June 2012

WCRP WDAC meeting, EUMETSAT, 4-5 March 2013

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The CLIVAR Mission

The World Climate Research Programme’s project on ocean-atmosphere interactions

To observe, simulate and predict changes in Earth’s climate system with a focus on ocean-atmosphere interactions, enabling better understanding of climate variability, predictability and change, to the benefit of society and the environment in which we live.
CLIVAR Global View with regional implementation
CLIVAR Objectives

• Understand the causes of climate variability on intra-seasonal to centennial time-scales through observations, analysis, and modeling.

• Improve predictions of climate variability and change associated with both internal and external processes.

• Extend observational climate record through assembly of quality-controlled paleoclimatic and instrumental data sets.
CLIVAR Key Capabilities

• Improving ocean observing systems
• Improving ocean system models
• Ocean data, synthesis and information systems
• Support of global assessments
• Knowledge exchange with societal actors
• Education and capacity building
CLIVAR Organisation (evolving)

Scientific Steering Group  ICPO

Crosscutting (global) Panels

Observations & Data
- Global Synthesis & Observations Panel
- PAGES / CLIVAR Working Group
- CCI / CLIVAR Expert Team on Climate Change Detection and Indices

Modeling
- Working Group on Seasonal to Interannual Prediction
- JSC / CLIVAR Working Group on Coupled Modeling
- Working Group on Ocean Model Development

Regional Panels
- CLIVAR / IOC Indian Ocean Implementation Panel
- Atlantic Implementation Panel
- Asian-Australian Monsoon Panel
- Variability of the American Monsoon Systems (VAMOS)
- Pacific Implementation Panel
- Southern Ocean Implementation Panel
- Variability of the African Climate System Panel
CLIVAR Achievements - Atlantic Implementation Panel: 

Decadal Prediction of SST

Projected Atlantic SST Change

Decadal Variations:

✓ Forced by External Processes

✓ Generated by Internal Processes

✓ Interactions of Forced and Natural Variability
Evolution of CLIVAR – Research Strategy

What’s in a Name?
• Climate variability and change in the atmosphere - ocean system
  (a proposal – ongoing naming)

Research Opportunities
• Intraseasonal, Seasonal & Interannual variability and predictability of monsoon systems
• Decadal variability & predictability of ocean & climate variability
• Extreme events in the atmosphere-ocean system
• Marine biophysical interactions and dynamics of upwelling systems
• Dynamics of regional sea level variability

Key Capabilities
• Improving ocean system models
• Improving ocean observing systems
• Support to Global Assessment
• Ocean data, synthesis and information systems
• Knowledge transfer and stakeholder feedback
• Education, capacity building and outreach
Evolution of CLIVAR – Main Directions

- CLIVAR remains the ocean-atmosphere program of the World Climate Research Program
- CLIVAR is in the process of formulating a new set of research opportunities that will contribute to the Grand Challenges of WCRP and the wider context of the oceans role in climate variability and change.
- CLIVAR will retain its global and balanced approach based on observations, models and theory and their joint exploitation for climate assessment and climate prediction.
- CLIVAR supports the development of sustained climate and ocean observations as well as targeted improvements to the ocean components of earth system models.
- CLIVAR will intensify its partnerships with the marine biogeochemistry and eco-system community as well as with a selected spectrum of its information user community.
- Back Education, capacity building and outreach.
- Next Step SGS-20 (May 2013, Kiel Germany)