CLIVAR/GOOS Indian Ocean Panel

Co-chairs: Weidong Yu
Yukio Masumoto

• IOP mostly focuses on Indian Ocean Observing System (IndOOS) implementation and data dissemination

• Outputs from IndOOS facilitates many climate-related researches
Indian Ocean Science Drivers

- Seasonal monsoons
- Severe weather events & cyclones
- Intraseasonal (30-60 day) variations, Madden Julian Oscillation
- Interannual variations: the Indian Ocean Dipole, Influence of ENSO
- Decadal variability and warming trends
- Ocean circulations & biogeochemistry

Indian Ocean is the most poorly sampled region of the tropics
Indian Ocean Observing System (IndOOS)

Multi-platform
Long-term
Observation
Network
Mooring Array: Present Status

- 56% complete
  (26 out of 46 Sites; 4 Flux Reference Sites)

- Recent deployments
  - ATLAS: 4°S, 12°S at 65°E (NOAA+NIO)
  - m-TRITON: 8°S, 95°E (JAMSTEC)
  - ATLAS: 8°S, 100°E (FOI+BRKT)

Status as of April 2010

Contributed Organizations:
JAMSTEC, NOAA, NIO, BRKT, IRD, FIO
Mooring Array: Plan for 2010

- Expand array from 26 to 33 moorings (71% complete)

- 65E array (NOAA+NIO)
- 80E array (NOAA+NIO)

Link to SIBER project
SIBER: Sustained Indian Ocean Biogeochemistry and Ecosystem Research

Contact information or additional details would be included here based on the context of the presentation.
IOP-SIBER collaboration promotes links among CLIVAR, IMBER, and GOOS.
Planned Biogeochemical Measurements:
A SIBER-RAMA Initiative

Objectives:

- Provide data for defining biogeochemical variability in key regions of the Indian Ocean and for understanding the physical, biological and chemical processes that govern it.

- (1) A fluorometer will be added on the 0°, 80°E RAMA mooring (The cruise is underway now!)

- (2) A proposal to NASA was submitted to fund bio-optical sensors on RAMA moorings at 15°N, 90°E; 0°, 80°E; and 8°S, 67°E for three years beginning in 2011.

- (3) PMEL, JAMSTEC, and FOI are planning to attach CO2 sensors to some buoys.
RAMA Mooring Deployment Status

Indian Ocean Mooring Status Update: Jun 01, 2009

Deployments in days

- Atlas Mooring (PMEL)
- Buoy Not Transmitting
- TRITON Mooring (JAMSTEC)
- Buoy Moved or Adrift

Deployment Data Return:

- 0% - 50%
- 50% - 75%
- 75% - 90%
- 90% - 100%

Sept 2007 to July-Aug 2009
IndOOS Resources Forum (IRF)

Background

• IndOOS has been implemented using bilateral corporations.
• IndOOS is being enhanced to include chemical and biological measurements
• Resources management has been an issue to implement/sustain the observing system.

• Establishment of the IRF under IOGOOS and its ToR were agreed at IOGOOS-6 (Hyderabad, 2008).
• The first IRF meeting will be held in Perth in July 16, 2010.
Objective of the IRF

• Facilitate and coordinate provisions for the resources required for IndOOS implementation,
• Promote contributions from institutions in the participating countries,
• Consider at first ship-time and mooring equipments for RAMA, in particular in the western Indian Ocean.

• Other resources required:
  • Argo floats in remote regions
  • Biogeochemical sensors on RAMA and Argo
  • Ship of opportunity XBT network
  • Surface drifters
  • …
Initial members of the IRF

- IRF members will be high-level representatives of institutions in their respective countries that have a stake in the development of IndOOS.

  - Tim Moltmann (IMOS, Australia)
  - David Vousden (ASCLME)
  - Shanqing Lin (SOA, China)
  - Patrick Monfrey (INSU, France)
  - Shailesh Nayak (MoES, India)
  - Ridwan Djamaluddin (BPPT, Indonesia)
  - Wendy Watson-Wright (IOC)
  - Shiro Imawaki (JAMSTEC, Japan)
  - Chester Koblinsky (NOAA, USA)
  - (Director, South African Weather Service)

Membership from other agencies will be addressed in the future.
Future plans and issues

- Keep the momentum for the implementation of IndOOS, especially RAMA
- Enhance links to other panels and working groups in CLIVAR (PP, AAMP, VACCS, WGSIP, MJO-WG, ...) and outside CLIVAR (SIBER, RGOOS, RCOFs,...)

- IOP identified Dr. Charles Magori as a new member to enhance connections to the African east-coast countries and asks for the SSG’s approval.
- There are several members whose term was expired in 2009. IOP will consider member rotations at the next IOP meeting in July. AAMP and VACS links will be considered.