

WORLD METEOROLOGICAL ORGANIZATION

**INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION (OF UNESCO)**

DATA BUOY COOPERATION PANEL

DBCP-XXVII/Doc. 6.4 Rev. 2
(29-Sep-11)

TWENTY-SEVENTH SESSION

ITEM: 6.4

GENEVA, SWITZERLAND
26-30 SEPTEMBER 2011

ENGLISH ONLY

REPORT BY THE TASK TEAM ON CAPACITY BUILDING

(Submitted by Sid Thurston, Chair, TT-CB, USA)

Summary and purpose of the document

This document contains the report by the chairperson of the DBCP Task Team on Capacity Building, and provides details on the outcome of the Second in-region Capacity Building workshop for countries of the Western Indian Ocean region, Balaclava, Mauritius, 2-6 May 2011 and preparations for the upcoming Third Workshop scheduled for Mombasa Kenya in May 2012.

ACTION PROPOSED

The Panel will review the information contained in this report and comment and make decisions or recommendations as appropriate. See part A for the details of recommended actions.

-
- Appendices:**
- A. Report by the Task Team on Capacity Building
 - B. Terms of Reference of the DBCP Task Team on Capacity Building
 - C. Goals for the Third DBCP in Region Western Indian Ocean Capacity Building Workshop, Mombasa, Kenya, May 2012

-A- DRAFT TEXT FOR INCLUSION IN THE FINAL REPORT

6.4.1 Sid Thurston, Chairperson of the Task Team on Capacity Building reported on the progress during the intersessional period. In particular, he provided comprehensive information on the preparation and outcome of the Second in-region Capacity Building workshop for countries of the Western Indian Ocean region, Balacava, Mauritius, 2-6 May 2011 (see Appendix A).

6.4.2 After discussion, the Panel agreed with the following action items:

- To convene the Third "DBCP In-Region Western Indian Ocean Capacity Building Workshop", April 2012, Mombasa, Kenya. The goals for the workshop are detailed in Appendix C (**action; TT-CB; Spring 2012**).
- To coordinate workshop preparations with the DBCP, Kenya Meteorological Agency, Kenya Marine & Fisheries Research Institute, the NOAA Office of Climate Observation (OCO), the African Monitoring of the Environment for Sustainable Development (AMESD), and the Agulhas-Somali Current Large Marine Ecosystem (ASCLME) (**action; Ali Mafimbo, S. Thurston & Secretariat; Autumn 2011**).
- To continue to build Observation Development Team (ODT) and Modelling Development Team (MDT) with Met/Ocean Institutes in the Western Indian Ocean Region (**action; TT-CB; DBCP-27**).
- To Assemble a Team to explore recent advances in Information and Communication Technology (ICT) to help facilitate more effective DBCP TT-CB Outreach and Capacity Building Activities on a larger scale (**action; TT-CB; DBCP-27**).
- To Enhance Coordination and Cooperation between TT-CB and WMO Regional Associations (**action; TT-CB; DBCP-27**).
- To Discuss Preparations and Funding Impact for an additional "South Asia Capacity Building Workshop" in Chennai India in 2012 (**action; TT-CB; DBCP-27, R. Venkatesan**).
- To Discuss Preparations for an additional "NE Asia Capacity Building Workshop" in Jeju South Korea in 2012 (**action; TT-CB; DBCP-27, B. Lee**).
- The Panel encouraged the TT-CB to investigate ways to add training material from all capacity building activities to IOC/IODE OceanTeacher (**action; TT-CB; DBCP-27**).

6.4.3 The Panel thanked Dr Thurston and members of the Task Team for their efforts. The full report of the Task Team will be included in the CD-ROM that will be distributed with the Session final report.

APPENDIX A

REPORT BY THE DBCP TASK TEAM ON CAPACITY BUILDING

Efforts for Capacity Development in Africa - Data Buoy Cooperation Panel (DBCP) With National Partners, Organized a Training Opportunity for Ocean in-situ Observations and Modelling in Africa.

Second In-Region Capacity Building Workshop of the Data Buoy Cooperation Panel for Countries of the Western Indian Ocean Balaclava, Mauritius, 2-6 May 2011

“Implementation and Operation of Western Indian Ocean and Greater Agulhas Current Observing System: Building Links and Predictive Capacity for East African Participation”

1. In November 2009, at the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) Third Session held in Marrakesh Morocco 4-11 November, endorsed the Partnership for New GEOS Applications (PANGEA) concept. www.jcomm.info/pangea-concept PANGEA provides for in-country practical applications training of ocean data to large and diverse groups of regional participants and the Mauritius workshop therefore formed part of the DBCP's contribution to the PANGEA concept.

2. The First DBCP In-Region Western Indian Ocean Capacity Building Workshop (WIO-1) was kindly hosted by the South African Weather Service (SAWS) in Cape Town in April 2010. The theme: Implementation and Operations of Indian Ocean Data Buoy Networks and their Applications for Enhancing Regional Predictive Capability. The focus was on observations and data collection, as well as modelling products and validation by in-situ ocean observations, with an overall aim to link regional Meteorological/ Ocean/ Climate models and data collection networks to provide national products. Two capacity building teams were initiated – the observational development team (ODT) and the modelling development team (MDT). Presentations from the first workshop can be found on: <http://www.jcomm.info/wio-dbcpl>

3. This Second training Workshop, hosted by the Mauritius Oceanography Institute, titled *“Implementation and Operation of Western Indian Ocean and Greater Agulhas Current Observing System: Building Links and Predictive Capacity for East African Participation”* (www.jcomm.info/wio-dbcpl2). This provided another opportunity to implement the concept of PANGEA, by complementing other existing capacity building programs and promoting the use of ocean observations for regional socio-economic sustainability. The Goals of the Workshop were successfully achieved as follows: Build capacity within Regional Institutes to apply new Indian Ocean Observing System (IndOOS) Data, such as from The Research Moored Array for African–Asian–Australian Monsoon Analysis and Prediction (RAMA) and others, for enhanced predictive Capability for the Region; Demonstrate the crucial role of ocean observations for understanding and predicting Regional weather, ocean and climate; Build In-Region Modelling Development Teams (MDT) and Observation Development Teams (ODT), including for the implementation of buoy programmes; and to demonstrate the Societal and Economic benefits of delivering enhanced ocean observing system data for better informed decisions such as for Fisheries Management and Extreme Events to include for droughts, floods and cyclones.

4. As contributions to IndOOS and RAMA implementation with Japan, China and other Regional Partners, the United States National Oceanic and Atmospheric Administration (NOAA) has been working with India and Indonesia to implement the Central/Eastern Indian Ocean Observing System for the past six years. Now the agency is also working with the Agulhas-Somali Current Large Marine Ecosystem (ASCLME) Project to implement the Western Indian Ocean RAMA Array. NOAA's partners contribute ship time while NOAA provides instruments and moorings. NOAA also contributes other benefits to its partners under "resource sharing" PANGEA agreements which include capacity building workshops, and training and education opportunities.

During this Mauritius Workshop, NOAA signed such a Memorandum of Agreement with the United Nations Development Program (UNDP) ASCLME for cooperative scientific and technical collaboration between NOAA and nine African/Indian Ocean States of the ASCLME.

Workshop Resolutions from the Mauritius Capacity Building Workshop

Resolution 1

The DBCP workshop participants recognise the growing partnerships within the WIO region in terms of Ocean-Atmosphere observations and the importance of effective coordination and sharing of resources to achieve the mutual aims and objectives in terms of data collection, analysis and its application for management and governance. The participants also recognise the role of the ASCLME Project in facilitating the development of a WIOSEA at both the scientific/technical level as well as the management and policy level. **The participants therefore encourage ASCLME to further the development of such an Alliance** in the WIO which will help to coordinate and integrate scientific effort and activities in the region with the ultimate aim of delivering end-products for management and governance in support of the social and economic needs of the countries.

Primary: ASCLME

Secondary: UNDP

Resolution 2

Recognizing the importance of collecting ocean and weather observations in data sparse areas such as the coast of Somalia where piracy precludes the security of research cruises and the placement of moorings, and currents preclude the placement of drifters. The Observation Development Team (ODT) recommends that **appropriate glider technology be used in a pilot project to see if real-time weather observations can be collected within this data sparse area.**

Primary: Ali Mafimbo

Secondary: Bill Burnett

Resolution 3

Recognizing the importance of **links between remote sensing and in-situ observations**, for long term monitoring, and modelling purposes, the UNDP/GEF ASCLME Project and the Mauritius Oceanography Institute (MOI) will pursue a collaborative agreement building on ASCLME activities in the WIO, AMESD and the proposed AMESD follow-on projects.

Primary: ASCLME

Secondary: Mauritius Oceanography Institute (MOI)

Resolution 4

Recognizing the importance of collecting ocean and weather observations in data sparse areas such as the Indian Ocean as well as the fact that members indicating willingness to become part of the International Buoys Deployment community the ODT recommends that **drifting weather buoys be supplied to African countries as a pilot project** and results be provided during the next Capacity Building Workshop. Interested participating African Met/Ocean Institutes will please provide a brief deployment plan to Primary and Secondary to include with their delivery address for the drifters shipment of when and how these drifters will be deployed.

Primary: Johan Stander

Secondary: Shaun Dolk

Resolution 5 (from WIO-1 Capetown Workshop April 2010)

During the first DBCP In-Region Western Indian Ocean Capacity Building Workshop in Capetown South Africa April 2010, representatives of Regional Met/Ocean Institutes put forward a Resolution to enhance ocean observations off the East coast of Africa to include five (5) Ocean Moored Buoys (Please see Figure 1). This resolution carried forward in Mauritius so is being included in this

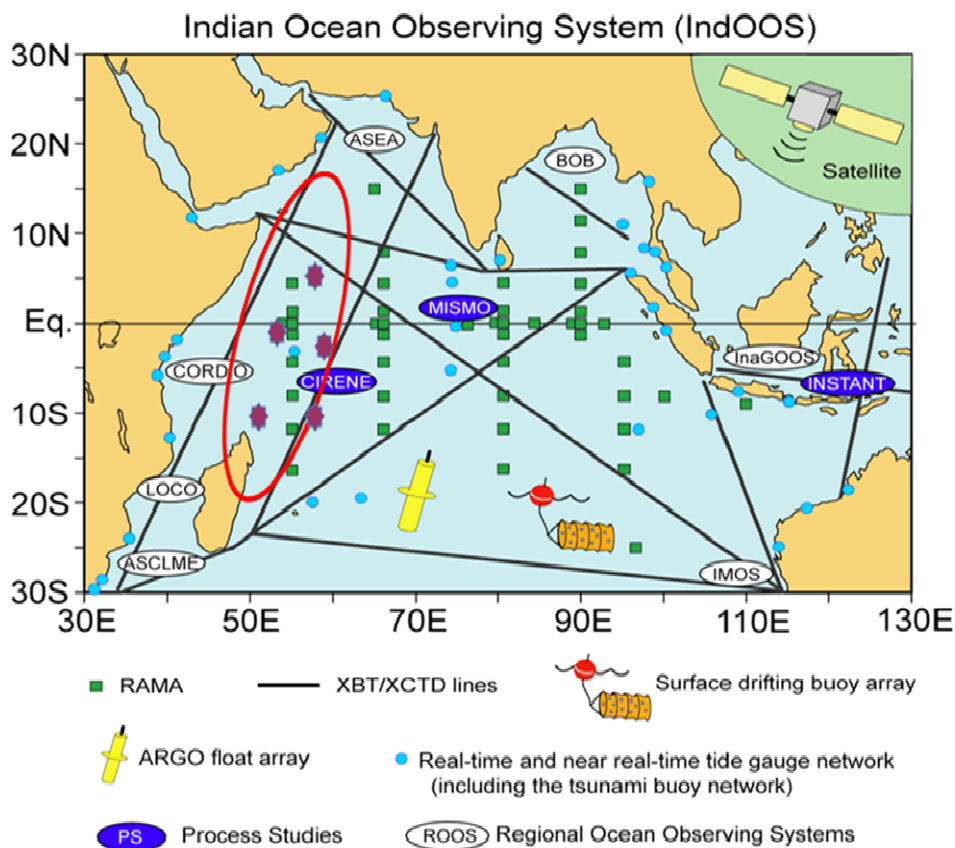
Second Workshop summary. Scientific justification for these additional in-situ observations off the East coast of Africa will help to better understand the following:

1. Intra-seasonal variability of the Somali jet over the East African coast and the mascarene pressures,
2. The response of the Somali current to the intraseasonal variability of the Somali Jet,
3. The dynamical and thermal feedback mechanisms between the cool temperatures in the filament and the modified wind stress,
4. The characteristics of the atmospheric convergence and divergence over the upwelling region and their influence on the climate of east African coast,
5. Specifically investigate how the SST and surface wind coupling affect vertical profile of the atmospheric boundary layer.

Primary: Kenya Meteorological Agency

Secondary: Tanzania Meteorological Agency

✿ Proposed moored buoys



APPENDIX B

TERMS OF REFERENCE FOR THE DBCP TASK TEAM ON CAPACITY-BUILDING

(as adopted at DBCP-XXIV)

The DBCP Task Team on Capacity-Building shall:

1. Initiate, plan and coordinate the implementation of the Training and Capacity-Building work programme including, in particular, the regular Training Course on Buoy Programme Implementation and Data Management;
2. Keep under review existing training material (paper and electronic) and advise on updating as well as for the development of new material;
3. Review and assess national, regional, and global requirements for capacity-building and develop / improve programmes as appropriate;
4. Liaise with other capacity-building programmes in relevant areas to develop and implement integrated activities, to explore potential synergies and opportunities for efficiently using resources available; liaise in particular with the JCOMM cross-cutting Team on Capacity-Building;
5. Endeavour to mobilize the resources required for DBCP capacity-building, including those needed for the implementation of the Training Courses;
6. Make recommendations to the DBCP Executive Board and / or the DBCP for addressing the issues above; and
7. Report to the DBCP Executive Board and the DBCP at its annual Sessions.

Membership:

The membership is open to all Panel members. The Chairperson, appointed by the Panel, has selected the following team members:

- Sidney Thurston (Chair)
 - NOAA / OCO (TT Chairperson)
 - DBCP Chairperson
 - DBCP Executive Board members
 - DBCP Vice-chairpersons (or their respective deputies)
 - DBCP Technical Coordinator
 - Ali Mafimbo (Kenya)
 - G. Latha (India)
 - Johan Stander (South Africa)
 - Lucy Scott (South Africa)
 - Hamad Mohammed Al Gheilani (Oman)
 - Mathieu Belbeoch (Argo Technical Coordinator)
 - Bill Burnett (USA)
 - Walter Flores Servat (Peru)
 - Djoko Hartoyo (Indonesia)
 - Byung-Gul Lee (Korea)
 - Kwan-Chang Lim (Korea)
 - Rick Lumpkin (USA)
 - David Meldrum (UK)
 - Jean Rolland (France)
 - R. Venkatesan (India)
 - Representative of the IOC & WMO Secretariats
-

APPENDIX C

GOALS FOR THE THIRD DBCP IN-REGION WESTERN INDIAN OCEAN CAPACITY BUILDING WORKSHOP (WIO-3) (Mombasa, Kenya April 2012)

- Continue to Build Capacity Within Regional Institutes to Apply New Indian Ocean Observing System (IndOOS) Data, such as from RAMA and others, for Enhanced Predictive Capability for the Region as for Fisheries Management and Extreme Events,
 - Continue to Find Synergy between DBCP in-situ ocean observations and Satellite Observations of the Regional Africa Monitoring of the Environment for Sustainable Development (AMESD),
 - Enhance Coordination and Cooperation between TT-CB and WMO Regional Association (RA-I),
 - Ensure advanced scientific and logistics information is conveyed to Participants well in advance of the Workshop,
 - Demonstrate the Crucial Role of Ocean Observations for Understanding and Predicting Regional Weather, Ocean and climate,
 - Discuss ways to mitigate implementation constraints by Regional Piracy to include potential coordination with African Ministerial Conference on Meteorology (AMCOMET),
 - Continue to Build In-Region Modelling Development Teams (MDT) and Observation Development Teams (ODT), including for the implementation of buoy programmes, by ensuring continuity of Participants from WIO-2,
 - Learn practical implementation aspects for the deployment of operational data buoys at sea, the collection of buoy data, and related data management,
 - Learn Practical Application of Regional Models for Addressing Impacts from Climate Change in the Coastal and Marine Environment and ensure Trainees have similar tools at their home institute to follow-up intersessionally,
 - Become Familiar with Tools for Identifying and Accessing Operational Data Streams for ocean/weather/climate Model Assimilation,
 - Validate Model Products from Indian Ocean Observations,
 - Coordinate Regional Institutes for Increasing in-situ Western Indian Ocean Observations to include enhanced coordination with DBCP International Buoy Program for the Indian Ocean (IBPIO),
 - Utilize advances in Information and Communication Technology (ICT) to facilitate more effective Outreach and Capacity Building Activities on a larger scale.
-