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Agenda Item: 6.5

IOC-WMO-UNEP-ICSU/GSSC-IX/11
Paris, February 2006
English only

**INTERGOVERNMENTAL
OCEANOGRAPHIC
COMMISSION**
(of UNESCO)

**WORLD
METEOROLOGICAL
ORGANIZATION**

**UNITED NATIONS
ENVIRONMENT
PROGRAMME**

**INTERNATIONAL
COUNCIL FOR
SCIENCE**

**Ninth Session of the Global Ocean Observing System
Scientific Steering Committee (GSSC-IX)**
Paris, France, 6 – 8 March 2006

**Summary Report on LME/GOOS-AFRICA Working Session on
Joint Activities between African LMEs and GOOS-AFRICA
at the First Workshop of the Canary Current Large Marine Ecosystem
10 October 2005, Saly, Senegal**

SUMMARY REPORT

LME/GOOS-AFRICA WORKING SESSION ON JOINT ACTIVITIES BETWEEN AFRICAN LMEs AND GOOS-AFRICA AT THE FIRST WORKSHOP OF THE CANARY CURRENT LARGE MARINE ECOSYSTEM SALY-SENEGAL, 10 OCTOBER 2005

On the 10th October 2005 in the context of the First Workshop of the Canary Current Large Marine Ecosystem (LME), the African LMEs Representatives and GOOS-AFRICA Coordinator participating in this Workshop met together and discussed the planning of major joint LME/GOOS-AFRICA activities that are scheduled for 2006 in Africa.

Participants

Andrew Cooke, Coordinator of the CCLME representing the CCLME
 Mike O'Toole, Regional Coordinator of the BCLME representing the BCLME
 Jacques Abe, Personal Assistant to the GCLME Director representing the GCLME
 Brad Brown from NOAA representing the Global LME
 Justin Ahanhanzo, the GOOS-AFRICA Coordinator

The Regional Coordinator of BCLME chaired the Session. He recalled the fruitful cooperation already established between ongoing African LMEs and GOOS-AFRICA. He recalled the three major forthcoming joint LME/GOOS-AFRICA activities that are scheduled in Africa as follows:

- 1- LME/GOOS-AFRICA Leadership Workshop on Operational Oceanography
- 2- The Second Pan-African LMEs Forum
- 3- The Third Forum of GOOS Regional Alliances (GRAs)

1- **LME/GOOS-AFRICA Leadership Workshop on Operational Oceanography:** Regarding the first activity, he recalled that the BCLME Coordinator together with the GOOS-AFRICA Coordinator and the senior staff of the Department of Oceanography of the University of Cape Town (UCT) have deployed considerable efforts since late 2004 to June 2005 leading to the definition of the scope, nature and the agenda of the Leadership Workshop. This Workshop was scheduled for 21-30 November 2005 at the UCT in South Africa. The GCLME Director, the GOOS-AFRICA Coordinating Committee and other relevant regional Stakeholders have significantly contributed to the planning of this workshop. The 7th LME Consultative Meeting held at the IOC/UNESCO Headquarters in Paris from 5-7 July 2005 commended the efforts accomplished by the BCLME Coordinator, the GCLME Director, the UCT Department of Oceanography and GOOS-AFRICA Coordinating Committee and supported this initiative.

2- **The Second Pan-African LMEs Forum:** Regarding the Second Pan-African LMEs Forum, he recalled the First Forum organized by the GCLME in 1998 and informed that the BCLME will be happy to host the Second Pan-African Forum in Cape Town back to back with the above Leadership Workshop.

3- **The Third Forum of GOOS Regional Alliances (GRAs):** Regarding the next GRAs Forum, he recalled that the Second GRAs Forum held in Fiji, 4-11 February 2004 and the Second Workshop of the GOOS Regional Alliances Network Development (GRAND) held in Genoa, Italy, 29 March-2 April 2005 decided that GOOS-AFRICA would host the next GRAs Forum in November 2006 in Africa. The 7th Session of the Intergovernmental Committee of GOOS (I-GOOS) endorsed the Organization of the GRAs Forum in Africa. In view of cementing the synergy between the LMEs and GOOS-AFRICA toward maximizing resources in cost effective way, the relevant African Stakeholders have suggested in August that the Leadership Workshop should be postponed till 2006 in order to meaningfully contribute to both LMEs and GRAs Fora.

The participants of the Session thanked the BCLME Coordinator for the excellent overview. They agreed that in order to root GOOS in the region and reinforce its regional dimension towards cementing the strong synergy between the LMEs and GOOS-AFRICA, the three activities should be jointly organized in an integrated way.

The Canary Current LME Coordinator indicated that the CCLME would have offered to host the GRAs Forum in this region. However, he drawn the attention of the participants on the fact that much is not yet done within the CCLME that is only at the PDF-B phase.

The Representative of GCLME considered that based on the fact that the GCLME is located between the CCLME and the BCLME and encompasses some of the countries of the two other LMEs, it would be worth to organize the GRAs Forum in the GCLME Regional Coordinating Unit in Accra. He however, requested to consult with the GCLME Director before he can confirm the offer of the GCLME to host that International Forum.

The BCLME Coordinator offered to host the GRAs Forum back to back with the joint LME/GOOS-AFRICA Leadership Workshop scheduled in Cape Town in 2006.

In conclusion, based on the information available, the participants suggested keeping the possibility of the location considering any information from the GCLME Director. Fortunately, on the 18 October 2005, the Director of the GCLME confirmed his support to the organization of the GRAs Forum to be hosted by the BCLME in Cape Town. Based on the above, the following schedule is tentatively suggested for the three activities to be hosted by the BCLME and the University of Cape Town in Cape Town, South Africa:

- Activity 1:** LME/GOOS-AFRICA Leadership Workshop with a parallel Meeting of the International Bilko Steering Committee (close meeting).
Place and dates: Cape Town, South Africa, 6-10 November 2006
- Activity 2:** The Pan-African LMEs Forum, Monday 13 November 2006
- Activity 3:** The Forum of GOOS Regional Alliances, 14-17 November 2006

The Group suggested that an International Organizing Committee should be set up for the planning and organization of the GRAs. This Committee should include the following leaders:

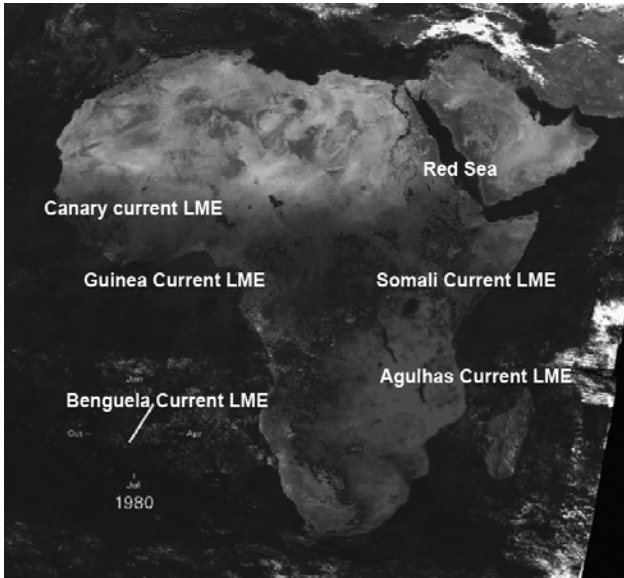
- 1- GOOS-AFRICA Chair as the Chair of that forum in Africa
- 2- Chairman of I-GOOS
- 3- Chairman of GOOS Scientific Steering Committee
- 4- GCLME Director as the Representative of the African LMEs
- 5- Chairperson of MedGOOS
- 6- Chairperson of the GOOS Regional Council
- 7- Outgoing Chairman of GOOS-AFRICA
- 8- Chairman of COOP
- 9- Global LMEs Coordinators: K. Sherman and B. Brown
- 10- Technical Secretary: GOOS-AFRICA Coordinator

However, the Group considered that this list is not exhaustive as relevant GOOS stakeholders may add other key players as appropriate. The Regional Coordinators of GOOS should be strongly associated in the design, planning and organization of the Forum. The support of the GOOS Project Office of IOC/UNESCO would be badly needed in term of financial resources to support both the logistics for the workshop and the participation of the GRAs Coordinators.

**PAN-AFRICAN LMEs/ GOOS-AFRICA LEADERSHIP WORKSHOP ON
OPERATIONAL OCEANOGRAPHY AND REMOTE SENSING IN AFRICA: NETWORKING
AND “TESTING THE WATER” IN GOOS-AFRICA AND AFRICAN LME PROGRAMMES
Cape Town, South Africa, 6-10 November 2006**

(with a closed parallel meeting of the International BILKO Steering Committee)

Background and Rationale



There is considerable international interest in ocean monitoring and operational oceanography, i.e. sustained ocean observations, monitoring and forecasting to enable responsible management of marine and coastal resources and support a variety of other maritime activities through timorous provision of appropriate information and decision making tools including forecasts. This is reflected in the strategies of the International Waters Programme of the Global Environment Facility (GEF).

Fig. 1 GOOS-AFRICA Network of productive Upwelling and LMEs. (Figure composed by J. Ahanhanzo).

GEF, through its Large Marine Ecosystem (LME) initiatives the Global Ocean Observing System (GOOS) of the Intergovernmental Oceanographic Commission (IOC) of UNESCO; the Agenda 21 and the Plan of Implementation of the World Summit on Sustainable Development. Endeavours are at present being made to develop close links between GOOS and the LMEs. Whereas several developed countries and regions have advanced ocean monitoring and observing systems in place, this is not the case in many developing parts of the world, Africa in particular. The IOC/UNESCO and the African Member States through the GOOS-AFRICA Programme and the network of African LME Programmes are attempting to address this and develop a viable (affordable, implementable and sustainable) ocean observing system to service the needs of African countries, regions and the continent as a whole. To this end, there have been ongoing collaboration and partnerships, including joint sponsorship of development activities, between GOOS-AFRICA and African LME programmes, the Benguela Current Large Marine Ecosystem (BCLME) and the Guinea Current Large Marine Ecosystem (GCLME) Programmes in particular, which are at advanced stage of implementation. Recently, GOOS-AFRICA Team attended and contributed to the Road Map Workshop of the Canary Current Large Marine Ecosystem, held in Dakar, 10-12 October 2005 and collaboration was then initiated between the two programmes. The level of cooperation that has resulted is seen as paving the way for fast-tracking collaboration in other developing regions and indeed globally, and a key theme for the next bi-annual meeting of the GOOS Regional Forum, which will immediately follow this Leadership Workshop, is the utility of the LME network as a vehicle for implementation of GOOS.

Justification

The Global Ocean Observing System for Africa (GOOS-AFRICA) was formally launched at the Pan-African Conference on Sustainable Integrated Coastal Management in Maputo in Mozambique in 1998 to take forward the implementation of GOOS in Africa. As a mean for implementation of the African Conventions for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region on one hand, and the Eastern African Region on the other hand, GOOS-AFRICA was adopted by the Summit of the African Heads of States in July 2002 in Mozambique as a key priority

program of the Environmental Action Plan of the New Partnership for Africa's Development (NEPAD). Subsequently, GOOS-AFRICA was presented at the Partnership Conference of the African Heads of States during the World Summit on Sustainable Development in Johannesburg in 2002 and at the Algiers Donors Conference in 2003.

Furthermore, based on both the WSSD and GOOS Plans of Implementation calling for a widespread utilization of Remote Sensing from space as a tool for sustainable development, the Thirty-Seventh Session of the IOC Executive Council adopted a Plan for the Use of Remote Sensing in Oceanography by developing countries. This Resolution called upon IOC to support the regional development of Remote Sensing for IOC programmes starting from Africa; capitalizing on the GOOS-AFRICA Remote Sensing Component and the success of the UNESCO Crosscutting Project on the Applications of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa.

In addition, the Sixth Session of the IOC/IUCN/NOAA LME Consultative Meeting held at the UNESCO/IOC Headquarters on 29-30 March 2004 endorsed the organisation of the first GOOS-AFRICA/LMEs Workshop on "*Integration of Remote Sensing and Modelling for Integrated Management of African Large Marine Ecosystems*" in 2005. The BCLME offered the hosting of that workshop in Cape Town in cooperation with the Department of Oceanography of the University of Cape Town, the Satellite Application Centre of the CSIR and the GCLME.

Recently, in October 2005, the GOOS-AFRICA and the LMEs Leaderships met in Dakar, Senegal, at a special Partnership Session in the framework of the Road Map Workshop of the Canary Current Large Marine Ecosystem and decided to join their efforts in organising the following three key activities that contribute to empower African capacity in operational oceanography towards integrated management of African LMEs.

The sequence of back-to-back meetings, all to take place in Cape Town, South Africa, is provisionally scheduled as follows:

- 1- Pan-African LMEs/GOOS-AFRICA Leadership Workshop on Operational Oceanography and Remote Sensing in Africa, Cape Town, South Africa, 6-10 November 2006;
- 2- The Second Pan-African LMEs Forum, Cape Town, South Africa, 13 November 2006;
- 3- The Third Forum of the GOOS Regional Alliances, Cape Town, South Africa, 14-17 November 2006.

The first meeting, the ***Pan-African LMEs/GOOS-AFRICA Leadership Workshop on Operational Oceanography and Remote Sensing***, is being planned to help address the real needs of African countries in respect of ocean observing and monitoring. The number of participants in the Leadership Workshop will be kept deliberately small, reflecting the workshop nature of the meeting and the need to generate a final Workshop Report at the end of the meeting. The Final Report will serve as demonstrable input to both the Pan-African LME Forum and the GOOS Regional Forum, and will serve as a blueprint for further application in LME programmes, particularly in other developing regions.

Objectives

The objectives of the Workshop are as follows:

- Assess the requirements and recent developments in African LME programmes in respect of operational oceanography (including observing and monitoring and forecasting), and restraints;
- Assess the requirements and recent developments in GOOS-AFRICA in respect of observing systems and their implementation, and restraints;
- Formulate potential strategies to address the identified needs in ways that are affordable, implementable and sustainable;

- Develop a viable draft plan that jointly addresses the needs of GOOS-AFRICA and the African LMEs and strengthens ties between these complementary initiatives, in particular the utilization of the African LME network for the implementation of GOOS-AFRICA and vice-versa;
- Build and further strengthen close links between key players in the African LMEs and GOOS-AFRICA, and strengthen capacity in African countries in operational oceanography;
- The output of the Workshop to serve as a blueprint for consideration by the GOOS Regional Forum at its November 2006 meeting and by the International Waters Programme of the Global Environment Facility;
- A major output will be a Book: African Oceans 2025: How African marine scientists and managers foresee the development of Operational Oceanography in Africa in 20 years?

Scope

The Leadership Workshop will address a broad spectrum of operational oceanography (physical, chemical, biological and resource related) and marine environmental monitoring activities of relevance to the management of African marine and coastal resources and infrastructure and to other users of ocean sourced data and information. The following *inter alia* fall within the scope of the Workshop:

- Monitoring and management needs/issues and requirements of African LMEs;
- *In situ* observations and measurements for African LMEs;
- GOOS-AFRICA: opportunities, needs and limitations;
- Satellite remote sensing applications and potential UNESCO BILKO distance learning;
- Use of data and information available in the public domain via the web;
- Data processing, management and fast-track interpretation;
- Global and regional ocean observing and forecasting systems appropriate for Africa;
- Socio-economic realities and constraints;
- Sustainability of coastal ocean observing systems;
- Predictability of African ocean systems;
- Modelling and data assimilation – the basis for forecasting;
- Potential donors and funding opportunities;
- Coordination with the New Partnership for Africa's Development (NEPAD) and the African Union.

Workshop Format

The Workshop will take the form of plenary and parallel sessions. There will be a limited number of invited and contributed presentations by acknowledged experts, but most of the time will be devoted to inter-person and inter- and intra-group discussion – i.e. participatory debate. The Workshop programme will be very intensive, spanning a full 5 days with an excursion being planned on a mid-week afternoon.

Training and Capacity Strengthening

The African LMEs and GOOS-AFRICA network are strongly addressing the training and capacity development plans to increase the critical mass of operational oceanography specialists and physical observing capacity in Africa. It is envisaged that the Workshop will reinforce these efforts and will contribute in a practical way to the development of appropriate skills and build capacity through: (i) the creation of awareness about the needs and opportunities, (ii) the establishment of long-term working partnerships between African oceanographers and ocean managers and some of the leading international institutions and experts in the field (environment, fisheries, maritime industry etc), (iii) the transfer of the latest international technology (e.g. in ocean observing systems and data management and its application) to the region and (iv) demonstration of ocean observing, monitoring and forecasting tools. Young African scientists and managers who have the essential basic observational and analytical skills will be specifically targeted to play an active role in the Workshop.

Workshop Output

The primary output product of the Workshop will be a comprehensive Workshop Report for consideration and potential adoption by the GOOS Regional Forum, with implementation to follow through the GOOS Regional Associations world-wide and the International Waters Programme of the GEF, other sponsors, beneficiaries etc.

The Workshop Report will include *inter alia* the following:

- Detailed assessment of the requirements and recent developments in African LME programmes in respect of operational oceanography (including observing and monitoring and forecasting), and restraints;
- Description of recent developments and specification of requirements of GOOS-AFRICA in respect of observing systems and their implementation, and restraints;
- Potential strategies to address the identified needs in ways that are affordable, implementable and sustainable;
- Draft plan that jointly addresses the needs of GOOS-AFRICA and the African LMEs and strengthens ties between these complementary initiatives, in particular the utilization of the African LMEs network for the implementation of GOOS-AFRICA and vice versa. (The plan must be affordable and implementable in a sustainable manner);
- Details of capacity strengthening and closer links established between key players in the African LMEs and GOOS-AFRICA in respect of operational oceanography;
- A blueprint for consideration by GRF at its November 2006 meeting and by the International Waters Programme of the GEF for fast-tracking and implementation;
- A Book: African Oceans 2025: How African marine scientists and Managers foresee the development of Operational Oceanography in 20 years?

Sponsorship

The Leadership Workshop is to be jointly sponsored by functioning African LME programmes and GOOS-AFRICA in partnership with a number of regional and international organisations. The Intergovernmental Oceanographic Commission of UNESCO being the main sponsor and organiser of the Workshop.

Finances

The total cost of the Leadership Workshop is estimated at approximately US\$100K. This amount will cover the hire of the venue, provision of lunches and teas for participants, travel and subsistence costs of a limited number of invited experts, costs associated with administration, and the drafting of the Workshop Report and the publication of the Book African Oceans 2025.

Participation

The Workshop is aimed at operational oceanography and remote sensing specialists, ocean data practitioners, ocean and maritime managers and other operational users of ocean information who have an interest in ocean development in Africa. The Workshop will be a focussed meeting of about 40 persons who possess the requisite skills and interests. (There will be an absolute maximum limit of 50 attendees.) Some 30 participants will be specifically invited. Top African and overseas experts will be targeted, many of whom will be leading international specialists in their fields.

International Scientific Committee

An International Scientific Committee is being set up for the planning and organization of the Leadership Workshop and for liaison with the bodies responsible for the meetings to follow. This Committee should include the following leaders:

- 1- GOOS-AFRICA Chair as the Chair of the Committee
- 2- Chair of I-GOOS

- 3- A vice-Chair of I-GOOS from Africa
- 4- The fourth vice-Chair of IOC in charge of capacity building
- 5- Chair of the GOOS Scientific Steering Committee
- 6- GCLME Director, as the Representative of the African LMEs
- 7- Chair of MedGOOS
- 8- Chair of the GOOS Regional Council
- 9- Outgoing Chair of GOOS-AFRICA
- 10- Chair of past COOP
- 11- Global LME Coordinators: K. Sherman and B. Brown
- 12- Director of GEO Secretariat
- 13- African Co-Chair for GEO
- 14- Chair of IOCEA
- 15- Chair of IOCWIO
- 16- Representatives of the African Development Bank
- 17- Director of the GOOS Project Office, IOC/UNESCO
- 18- Technical Secretary: GOOS-AFRICA Coordinator, IOC/UNESCO

Workshop Host and Local Organising Committee

The host of the Leadership Workshop will be the Marine Research Partnership of the University of Cape Town. A Local Organising Committee is being drawn from the UCT Marine Research Partnership, the Environmental Variability Secretariat of the Benguela Current Large Marine Ecosystem and the Marine and Coastal Management Division of the Department of Environmental Affairs and Tourism of South Africa.

Venue and Date of Workshop

The venue will be the Breakwater Lodge of the Graduate School of Business of the University of Cape Town, in the V&A Waterfront, Cape Town. The provisional dates are as follows. There will be a Workshop Meet-and-Greet on the evening of Sunday 5 November 2006. This will be followed by five days of intensive work from 6-10 November 2006, with an excursion/field trip on a mid-week afternoon. The Workshop will conclude late on Friday 10 November 2006. The Workshop Report will then be fed into the meetings in the following week.

Language

The official language of the Workshop will be English.

Execution and Administration

The GOOS Project Office of the IOC/UNESCO in partnership with the BCLME Programme's PCU (Programme Coordination Unit) will facilitate all arrangements for the Leadership Workshop and administer the relevant finances. IOC and BCLME PCU will liaise closely with the various sponsors, with the other interested and affected parties and will be assisted and advised by the ISC and LOC and other experts as appropriate.

Work Plan and Timetable

Initial workshop concept: March 2004

Preliminary arrangements: November 2004-October 2005

Networking and "testing the water" in GOOS-AFRICA and African LME programmes: Concept document finalised (this document): December 2005.

Appoint International Scientific Committee and develop a comprehensive programme for the Leadership Workshop: February 2006

Appoint Local Organising Committee: February 2006

Approval in principle by Intergovernmental Oceanographic Commission and African LME Chief Technical Advisors: March 2006

Sourcing sponsorship and funding: March 2006

Finalisation of Workshop documentation, detailed budget and endorsement by sponsors: June 2006

Finalise list of invitees and issue invitations: June 2006

Follow-up activities by ISC and LOC: July-October 2006

Hold Leadership Workshop and draft Workshop Report: November 2006

Finalise and submit Workshop Report to follow-up meetings: November 2006

Implementation by Large Marine Ecosystems worldwide and GOOS Regional Associations: 2007 onwards.

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