



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)

FOURTH SESSION
OF IOC SUB COMMISSION FOR AFRICA AND THE ADJACENT ISLAND STATES

Alexandria, Egypt
6-8 March 2017.

EXECUTIVE SUMMARY

In accordance with Rule of Procedure 48.3, the IOC Sub Commission for Africa and the Adjacent Island States (IOC-AFRICA), as a Primary Subsidiary Body of IOC, is required to report to a Governing Body on its sessions.

The IOC Assembly at its 29th Session will be invited to consider this Executive Summary.

1. The Fourth session of the IOC Sub Commission for Africa and the Adjacent Island States (IOCAFRICA) was held at the Sheraton Montazah Hotel in Alexandria, Egypt from 6-8 March 2017. The session, which was hosted by the National Institute of Oceanography and Fisheries of Egypt, was attended by more than 55 participants representing 17 member states (Angola, Benin, Cote d'Ivoire, Democratic Republic of Congo, Egypt, Gabon, Ghana, Guinea, Kenya, Madagascar, Mauritius, Mozambique, Nigeria, Senegal, South Africa, Togo, and the United Republic of Tanzania) and other partners. The session was preceded by a preparatory experts meeting 4-5 March 2017 attended by 17 experts, who prepared draft work plan and recommendations for consideration by the session.
2. The session was officially opened by the Prof Essam Khamis, Deputy Minister of Higher Education and Scientific Research for Arab Republic Egypt, who outlined the unique relations that Egypt has with UNESCO, and the key role that UNESCO has played in the fields of education, science and culture in Egypt, including the revival of the Library of Alexandria, and the saving of the temple of Abu Simbel. Prof Khamis noted that Egypt is closely linked to other African countries socially and economically and they share a common destiny. In concluding, Prof Khamis emphasized the role of the African Union in bringing together the countries of the region. Keynote presentations were made by: Prof Gad El-Qady (President of NIOF) on the history and programmes of the National Institute of Oceanography and Fisheries, and by Dr Vladimir Ryabinin (IOC Executive Secretary) on the programmes and activities of the Commission and the related global/international frameworks and their relevance to IOCAFRICA. The opening session was also addressed by Dr Monde Mayekiso (IOCAFRICA Chair), and Dr Bisher Imam (representing Director of UNESCO Regional Bureau for Science in the Arab States).
3. The IOCAFRICA Technical Secretary presented an overview of the activities implemented by the Sub Commission during the intersessional period 2015-2017. These included: (i) Capacity development in marine science and technology, with training courses on a wide range of topics, including Ocean Forecasting, Ocean Data and Information Management, Communication and Outreach in Marine Sciences hosted by the Regional Training Centres for the Ocean Teacher Global Academy in Kenya, Mozambique and Senegal.

(ii) workshops on Ocean forecasting for the Western Indian Ocean were organized in collaboration with the Western Indian Ocean Marine Sciences Association in August 2015 and August 2016, (iii) Western Indian Ocean Planning workshop for the Second International Indian Ocean Expedition (October 2015, Maputo, Mozambique), followed by development of national work plans for IIOE-2 by Kenya, Madagascar, Mauritius, Mozambique and South Africa. These have been merged into a WIO regional work plan for IIOE-2, (iv) Review of the status of the African Sea Level Observation network, and preparation of three proposals for ocean observing systems for the Indian Ocean and Red Sea region, Mediterranean Sea and Eastern Atlantic (v) Review and consolidation of the products and services developed in the various phases of ODINAFRICA (now available through the ODINAFRICA website - www.odinafrica.org). Progress was also made in the setting up of an African Ocean Data portal, with the regional node established at KMFRI. An Ocean Science Essay competition was organized for secondary schools in Kenya to mark the World Ocean Day in 2016, (vi) Collaboration has been established with the Caribbean Marine Atlas, and experts from the region are working on transferring the African Coastal and Marine Atlas from SMARTATLAS to the Geonode software used by CMA, (vii) workshop on climate change adaptation in the coastal zones of Africa was organized in collaboration with the Adaptation Fund in Dakar, Senegal in August 2015, and IOCAFRICA is collaborating with WIOMSA in the implementation of a project on the Responses of Biological Productivity and Fisheries to Changes in Atmospheric and Oceanographic Conditions in the Eastern Africa coastal region, (viii) IOCAFRICA has collaborated with the International Atomic Energy Agency (IAEA) in the organization of several activities on Harmful Algal Blooms, including an experts workshop (February 2016, Mombasa, Kenya) and training course on phytoplankton collection and identification (September 2016, Agadir, Morocco). Collection of baseline information on HAB occurrence is ongoing.

4. **The Sub Commission noted the good progress** that has been made in the implementation of the planned activities. **Some delegates felt that** it was important to highlight relevant activities implemented by member states and other organizations from the region in line with the IOCAFRICA work plans. This includes activities to mark the World Ocean Day and the African Day of Oceans and Seas, as well as the Extra-Ordinary Summit of the Assembly of the African Union on Maritime Security, Safety and Development and related Side Events (10-15 October 2016, Lome, Togo). The Sub Commission requested the secretariat to revise the report on IOCAFRICA Activities 2015-2017 taking into account the activities highlighted during the discussions.
5. **The Sub Commission welcomed the** collaboration with the various organizations in the region in the implementation of activities and urged the secretariat to explore linkages with other organizations and reiterated that IOCAFRICA should truly serve as a “unique Africa-wide platform, bringing together Member States, UN agencies and other stakeholders, to drive research, observations, and disaster preparedness and mitigation for the sustainable management of the African oceans and coastal areas” as outlined in the IOCAFRICA Strategic Plan. The Sub Commission in particular emphasized the importance of strengthening linkages with the African Union Commission.
6. **The Sub Commission noted the urgent** need to strengthen the secretariat to enable it achieve its mandate. This could be done through the following: (i) Secondment of staff to the secretariat by member states from the region, (ii) Transfer of the coordination of some activities to institutions in member states in the region, and (iii) Dedication of staff in the member states to support the implementation of activities in the IOCAFRICA work plan. **Several delegations emphasized the need** for member states from the region to provide financial and/or in-kind contribution for implementation of the Sub Commissions activities. This could include coordination of implementation of activities, hosting and covering some costs of events/activities, providing experts to assist in the implementation of activities, including training courses etc.
7. **The Sub Commission thanked the** all Member States who have provided support for implementation of IOCAFRICA activities during the inter-sessional period, and in particular Egypt for hosting and support the organization of the Fourth Session of IOCAFRICA.

8. The IOC Executive Secretary welcomed the supportive interventions by the delegates at the session and reiterated his commitment to the strengthening of the Sub Commission. He reminded the delegates of the challenging financial position faced by IOC and UNESCO, and pointed out the importance of aligning the IOCAFRICA work plans with regional frameworks such as the African Unions Agenda 2063, the 2050 African Integrated Maritime Strategy, the African Decade of Oceans and Seas, and the Second International Indian Ocean Expedition. The work plans should also contribute to the development of the Blue economy in the region. He urged member states to support the declaration of a UN Decade for Ocean Sciences as this is likely to boost investments in resources and capacities for ocean sciences globally. He expressed his willingness to meet governments and organizations in the region to convey the ocean message.
9. Presentations were made on the National Ocean Programmes and Plans for the following member states: Angola, Benin, Cote d'Ivoire, Democratic Republic of Congo, Egypt, Gabon, Ghana, Guinea, Kenya, Madagascar, Mauritius, Mozambique, Nigeria, Senegal, South Africa, Togo, and Tanzania
10. **The delegates noted** that member states from the region are at different stages of developing their capacities for ocean sciences and that they do not have the same means. It was noted transboundary diagnostic analyses (TDAs) have been implemented in most of the sub-regions in the framework of the Large Marine Ecosystem projects. These together with the national reports presented at the session and the results of the various assessments undertaken by IOCAFRICA in recent years provide good insight on the current status and should be synthesized to assist in the establishment of consortia of member states to work on specific issues of common interest.
11. **The Sub Commission commended** the experts who had participated in the IOCAFRICA-IV Preparatory Experts meeting (4-5 March 2017, Alexandria, Egypt) for detailed proposals they had prepared for consideration, and requested the secretariat to organize similar experts meeting ahead of future sessions of the Sub Commission.
12. The IOCAFRICA Technical Secretary provided an overview of the partnerships that have been implemented during the intersessional period. These included the Western Indian Ocean Marine Sciences Association (WIOMSA), the Food and Agriculture organization's EAF/NANSEN programme, the State Oceanic Administration (China), and the International Atomic Energy Agency. He drew the attention of the Sub Commission to the project on "Strengthening Global Governance of Large Marine Ecosystems and Their Coasts through Enhanced Sharing and Application of LME/ICM/MPA Knowledge and Information Tools" which provides an excellent opportunity for strengthening collaboration with the African LME projects and other organizations in the region. The IOCAFRICA Technical Secretary also provided an overview of the activities implemented under the frame of the project "Enhancing oceanography capacities on the CCLME Western Africa countries. A concept note for a third phase of the project was presented.
13. Other presentations on partnerships included:
 - (i) report of an adhoc committee set-up by the Third session of IOCAFRICA to develop a draft work plan for China-Africa collaboration in Marine Sciences and Technology presented by Prof Mohamed Said, IOCAFRICA Vice Chair Group C
 - (ii) East Atlantic Hydrographic Commission
 - (iii) CIESM Marine Geosciences Committee
 - (iv) JCOMM CD Strategy
 - (v) Ocean Teacher Global Academy project and its Regional Training Centres

14. **The Sub Commission adopted the** report of the adhoc committee that had been set-up to develop a draft work plan for China-Africa collaboration in Marine Sciences and Technology and requested the IOCAFRICA Officers and secretariat to engage with the Chinese partners to review and explore the possibility of implementing it.
15. **The Sub Commission welcomed** the collaboration that had been developed with other organizations, programmes and projects and urged the secretariat to strengthen these partnerships and initiate the development of new partnerships, especially with the African Union secretariat. **The Sub Commission pointed** out that such partnerships will enable the development of big projects that can contribute to the development of ocean sciences in Africa.
16. **The Sub Commission elected** the following members of the Bureau for the Sub Commission to serve for the next inter-sessional period and the fifth session of the IOCAFRICA:
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|----------------------|---------------------------------|
| Chair: | Prof Mohamed Ahmed Said (Egypt) |
| Vice Chair Region A: | Dr Adesina Adegbe (Nigeria) |
| Vice Chair Region B: | Dr John Bemiasa (Madagascar) |
| Vice Chair Region C: | Vacant |
17. **The Sub Commission noted with concern** that there were no validly nominated candidates for IOCAFRICA Vice Chair Region C. Only two member states from the region (Egypt and Senegal) had attended the current session of the Sub Commission, with Egypt being elected as Chair of the Sub Commission. A candidate nominated by Senegal had not yet received the necessary clearance by the time of the elections. The Sub Commission considered several options for the filling the position of IOCAFRICA Vice Chair Region C and agreed that: (i) the IOCAFRICA Chair will double as Vice Chair Region C in an interim capacity. (ii) Member states from the IOCAFRICA region C will be requested to nominate candidates for an IOCAFRICA Vice Chair for the region and an election will be held either during the 29th session of the IOC Assembly, or by email.
18. **The Sub Commission decided** to hold its next (Fifth) session in the first quarter of 2019, and **welcomed** the offer of Nigeria to explore the possibility of hosting the next session in Lagos, Nigeria. The Sub Commission requested the secretariat to ensure that the dates of the fifth session do not overlap with those of the UNESCO governing bodies and other relevant meetings.
19. **The Sub Commission adopted** six recommendations on: (1) Ocean Observations and Monitoring, (2) Ocean Sciences and Assessments, (3) Ocean Data and Information Management, (4) Capacity Development and Awareness, (5) Resource Mobilization, and (6) Programme of Work 2017-2019
20. **The Sub Commission requested** the Chair to present Executive Summary Report and Recommendations to the 29th Session of the IOC Assembly that will take place from 21-29 June 2017 at the UNESCO Headquarters in Paris, France.

Recommendation IOCAFRICA-IV.1

OCEAN OBSERVATIONS AND MONITORING

The IOC Sub-Commission for Africa and the Adjacent Island States,

Notes that the progress that has been made in developing proposals for elements of an African Ocean Observing System, including the ROOFS-AFRICA proposal, the review of the statues of the African Sea Level Network, the WIO work plan for the Second International Indian Ocean Expedition IIOE-2 (2015-2020),

Emphasises the importance of developing capacities for ocean observations and monitoring to enable experts and institutions to participate effectively in regional and global programmes,

Establishes the IOCAFRICA Group of Experts on Ocean Observations and Monitoring to develop a detailed proposal for Ocean Observations and monitoring, taking into account: (i) the draft proposals already developed by IOCAFRICA for the Mediterranean Sea, Western Indian Ocean and Red Sea, and the Eastern Atlantic regions, (ii) the proposals for ROOFS-AFRICA developed in the framework of GOOS-Africa; and (iii) the proposals developed in the framework of the GMES programme. The proposal should include possibilities for provision of equipment for ocean observations.

Requests the IOCAFRICA Officers, in consultation with the secretariat, to:

- (i) Develop detailed Terms of Reference for the Group of Experts.
- (ii) Identify experts from the region to serve in the Group of Experts.

Requests the Chair of IOCAFRICA to contact the Chair of GOOS Africa and explore possible collaboration and coordinated actions

Encourages Member States from the region to actively participate in, and contribute to the development and implementation of the IOCAFRICA programmes on Ocean Observations and Monitoring

Recommendation IOCAFRICA-IV.2

OCEAN SCIENCES AND ASSESSMENTS

The IOC Sub-Commission for Africa and the Adjacent Island States,

Welcomes the linked established with the International Atomic Energy Agency – IAEA for the implementation of the Harmful Algal Bloom programme

Congratulates the IOCAFRICA Group of Experts on Harmful Algal Blooms for the excellent work in developing a work plan for HABs

Endorses IOCAFRICA work plan on HABs

Recognises the importance of collection of baseline information on climate change related parameters, including acidification, oxygen content of ocean waters and marine biodiversity,

Establishes the IOCAFRICA Group of Experts on Ocean Sciences and Assessments to develop a detailed proposal for Ocean Sciences and Assessments taking into account IOCAFRICA

programme for Harmful Algal Blooms and the need to collect standardized baseline information for relevant parameters

Requests the IOCAFRICA Officers, in consultation with the secretariat, to:

- (i) Develop detailed Terms of Reference for the Group of Experts, incorporating the activities of the previous group of experts on HABs.
- (ii) Identify experts from the region to serve in the Group of Experts.

Encourages Member States from the region to actively participate in, and contribute to the development and implementation of the IOCAFRICA programmes on Ocean Sciences and Assessments.

Recommendation IOCAFRICA-IV.3

OCEAN DATA AND INFORMATION MANAGEMENT

The IOC Sub-Commission for Africa and the Adjacent Island States,

Notes that the importance of the NODCs websites as a source of oceanographic data and information relevant to the respective countries **and urged the** ODINAFRICA and IODE National Coordinators to ensure they are regularly updated.

Establishes the IOCAFRICA Group of Experts on Ocean Data and Information Management to:

- develop proposals for joint activities to keep the ODINAFRICA network active and engaged
- Develop follow-up project proposals focussing on the improvement and use of the African Coastal and marine Atlases for coastal management
- Develop strategies for improving interactions between the NODCs and users (and potential users) of the NODC services and products.

Requests the IOCAFRICA Officers, in consultation with the secretariat, to:

- (i) Develop detailed Terms of Reference for the Group of Experts.
- (ii) Identify experts from the region to serve in the Group of Experts.

Urges the ODINAFRICA National Coordinators and National Oceanographic Data and Information Centres to trace and archive datasets collected by projects that have been completed.

Recommendation IOCAFRICA-IV.4

CAPACITY DEVELOPMENT AND AWARENESS

The IOC Sub-Commission for Africa and the Adjacent Island States,

Emphasized the importance on improving the visibility at the national level and urged the IOC National Focal institutions to publicize the IOCAFRICA programmes and activities in their respective countries so as to ensure that national representatives at regional fora such as the African Union and Regional Economic Commissions are aware of the existence and activities of IOCAFRICA.

Noted that the key issues related to capacity development that need to be addressed include: (i) Lack of implementation of the knowledge acquired and/or skill developed in workshops, (ii) Lack of

centers of excellence in Africa, (iii) High mobility of experts within or outside the region, and (iv) Shortage of research infrastructure

Recalled that these issues had been discussed extensively in the IOCAFRICA Capacity Development Concept Note presented at the Third session of IOC's Sub Commission for Africa and the Adjacent Island States (14-15 April 2015, Nairobi, Kenya),

Further recalled the decision taken during IOCAFRICA-III to organize a Pan African Conference on Marine Science and Technology in 2018.

Welcomed the offer of Egypt to host the conference in Sharm El Sheikh and requested the secretariat to discuss this with the Egyptian authorities

Establishes the IOCAFRICA Group of Experts on Capacity Development and Awareness to assist in the development and coordination of relevant activities.

Requests the IOCAFRICA Officers, in consultation with the secretariat, to:

- (i) Develop detailed Terms of Reference for the Group of Experts.
- (ii) Identify experts from the region to serve in the Group of Experts.
- (iii) Explore mechanisms for ensuring the active participation
- (iv) invite key note speakers to address the emerging issues at future sessions of the Sub Commission,
- (v) organize activities aimed at raising awareness of students (youth??) on ocean issues
- (vi) Update the IOCAFRICA experts' database.
- (vii) Commence preparations for the proposed Pan African Conference on Marine Sciences and Technology in 2018 (including development of concept note, identification of potential partners, finalization of dates and venue, and establishment of scientific committee)

Encourages member states from the region to organize activities to mark the World Oceans Day (8 June) and the African Day of Oceans and Seas (25 July) and share details of the activities with the IOCAFRICA secretariat to disseminate widely.

Recommendation IOCAFRICA-IV.5

RESOURCE MOBILIZATION

The IOC Sub-Commission for Africa and the Adjacent Island States,

Noting that funding and staffing for IOCAFRICA continues to be a challenge,

Stressed the importance of member states from the region providing support in cash and in kind for the implementation of regional initiatives. This could include taking scientists from other countries in the region on board their oceanographic research vessels.

Re-emphasized the need for collaboration with other projects and organizations, especially the African Union **and urged the** secretariat and the IOCAFRICA Officers to explore opportunities for joint implementation of activities (and fund raising) with other projects and organizations in the region.

Established an intersessional Working Group to spearhead the development of a resource mobilization strategy for the Sub Commission, and the development of flagship proposals on priority areas for the Sub Commission

Requests the IOCAFRICA Officers, in consultation with the secretariat, to:

- (i) Develop detailed Terms of Reference for the Working Group
- (ii) Identify experts from the region to serve in the Working Group

Recommendation IOCAFRICA-IV.6

PROGRAMME OF WORK 2017–2019

The IOC Sub-Commission for Africa and the Adjacent Island States,
Noting the progress made in the implementation of the IOCAFRICA-II work plan,

Bearing in-mind the resource constraints faced by UNESCO and its IOC,

Expresses its appreciation to the Member States, regional and international partners who have provided financial and technical support for implementation of activities in the region,

Thanks the Member States from the region who have provided in-kind support for the Sub Commission, including Nigeria that has printed copies of the IOCAFRICA Strategic Plan 2014-2021, Kenya for the use of its oceanographic research vessel RV Mtafiti for a regional training workshop, and Egypt for supporting the organization of and hosting of the Fourth session of the Sub Commission,

Recalls that the IOCAFRICA Strategic Plan for 2014-2021 provides that joint evaluation of the Sub Commission should be regularly conducted, at the end of each biennium, by a small group of selected experts from inside and outside the region to combine the insiders' views with the more objective and possibly wider viewpoint of outsiders.

Notes that no joint evaluation had been undertaken, and emphasized that this should be a priority of the newly elected IOCAFRICA Officers.

Adopts the programme of work for the Sub-Commission for the period 2017–2019 with prioritisation of the following elements:

Ocean Observations and Monitoring

- (i) Surveys and monitoring of essential oceanographic and meteorological parameters, to develop tools in support of ocean modelling and forecasting, early warning for ocean related hazards, as well as food security and sustainable development
- (ii) Inventory of previous ocean related hazards and extreme events (frequency, intensity, etc.) and mapping of vulnerable areas
- (iii) Survey and mapping of marine ecosystems to facilitate and support the development of ecosystem services

Ocean Sciences and Assessments

- (i) Climate change and vulnerability, ocean acidification
- (ii) Ocean modelling and forecasting (including extreme weather events such as storm surges)
- (iii) Monitoring trends in ecosystem degradation
- (iv) Monitoring of Harmful Algal Blooms and biomarker indicators

- (v) Marine Biodiversity and baseline surveys
- (vi) Marine Spatial Planning to zone different activities (fishing, tourism, aquaculture, mining, dredging, dumping etc)
- (vii) Development of other ocean science initiatives for the region

Ocean Data and Information Management

- (i) Improving access to ocean data and information (including the development of an African Ocean Data and portal)
- (ii) Updating the African Coastal and Marine Atlases
- (iii) Developing a marine biodiversity and biogeography data management programme (building on AfReMas and Afri-OBIS)
- (iv) Preparation of ocean data and information products for Sustainable Development of the Ocean and Coastal regions (including the use/implementation of marine spatial planning)
- (v) Updating of the databases created (experts, institutions, and projects)

Capacity Development

- (i) Development of an IOCAFRICA Capacity Development portal
- (ii) Continuous professional development for marine scientists from the region, including training courses and workshops on topics such as: Operational Oceanography, Ocean modelling and forecasting, Marine Biodiversity, Marine Spatial Planning, Harmful Algal Blooms, Application of remote sensing to coastal management etc.)
- (iii) Strengthening and development of regional training centres (including centres of excellence on Operational Oceanography in South Africa, Marine Biodiversity in Tanzania and Senegal, remote sensing in Mauritius, and Ocean Data and Information Management in Kenya)
- (iv) Strengthening ocean science programmes in African Universities (including development of curriculum), improvement of linkages between centres of excellence and universities, and provision of equipment for research.
- (v) Mentorship and programmes targeting youth and female scientists

Public Awareness and Science Policy Interface

- (i) Support for activities to mark World Oceans Day (8 June) and African Day of Oceans and Seas (25 July)
- (ii) Coordination and resource mobilization
- (iii) Developing partnerships and linkages with other organizations, programmes and projects
- (iv) Public awareness and advocacy
- (v) Pan African Conference on Marine Sciences and Technology in 2018

Requests the IOC Executive Secretary to explore opportunities for additional extra budgetary resources for the implementation of these activities.

Urges Member States to actively participate in the Sub-Commissions programme in accordance with their priorities, interests and capabilities.