



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)

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

Cape Town, South Africa
3–4 April 2013

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 27th Session will be invited to consider this Executive Summary.

1. The Second session of the IOC Sub-Commission for Africa and the Adjacent Island States was officially opened by the Director-General of South Africa's Department of Environmental Affairs, Nosipho Ngcaba, on behalf of the Minister for Water and Environment Ms E. Molewa. The opening session was also addressed by the Vice Chancellor of the University of Western Cape Prof B. O'Connell, the IOC Executive Secretary Dr Wendy Watson-Wright, and the IOC Chair Prof. S.K. Byun.
2. **The Sub-Commission thanked** the IOC Executive Secretary for the detailed presentation on IOC Activities in Africa in the period 2008–2013. These included: (i) Capacity development on a wide range of topics, including data and information management, application of modeling and remote sensing to coastal management, tsunami hazard and risk assessment, coastal inundation modeling, and sea level data analysis; (ii) the upgrade and installation of sea level stations in Cameroon, Congo, Djibouti, Ghana, Kenya, Mauritania, Mauritius, Mozambique, Senegal, Seychelles, South Africa and Tanzania. (iii) implementation of the project on Adaptation to Climate and Coastal Change in West Africa, (iii) enhancing collaboration between climate and ocean experts in order to improve climate prediction by incorporating ocean data. (iv) implementation of the project on the Integrated Data and Information Products and Services for the Management of Oceans and Coastal Zones of Africa, focusing on strengthening of national marine data and information centres, development of Coastal and Marine Atlases, development of the African Register of Marine Species, marine mammals survey in Canary Current LME region, repositories of marine publications, and directories of experts and institution, (v) implementation of a series of Advanced Leadership workshops for Heads of marine institutions and senior role models to empower them with skills to enable implement changes in their institutions and make them sustainable and better serve their national stakeholders, (vi) Support to UNESCO Chairs in marine sciences in Mozambique and Tanzania, (vii) implementation of projects on development and use of Decision Support tools were implemented in Benin, Cameroun, Kenya, Mozambique, Nigeria, Seychelles, Tanzania and Togo.

3. **The Sub-Commission noted** the guidance provided in the Draft UNESCO Strategic Plan 2014–2021, the UN Secretary General's *Oceans Compact*, and the Elements of the IOC's Draft Strategy 2014–2021, and took these into account in reviewing the Draft Strategic Plan for the Sub-Commission prepared by the Inter-sessional Working Group. The session recommended changes and amendments, to make the background information more comprehensive, strengthen the elements of collaboration with partner organizations, and the addition of an implementation table with key indicators. (Annex III in English and French)
4. **The Sub-Commission welcomed** the presentations that were made on relevant activities of other projects and organizations. These included presentations by the secretariats of the Abidjan and Nairobi Conventions of the UNEP Regional Seas programme, the Benguela Current Commission, the Western Indian Ocean Marine Science Association and Agulhas Somali Current Large Marine Ecosystem project, as well as the Nelson Mandela Metropolitan University, University of Western Cape, and the Cape Peninsula University of Technology. The session requested the secretariat to follow-up on the opportunities for collaboration identified in the discussions following the presentations.
6. **The Sub-Commission adopted** a provisional work plan for the period 2013–2015, that will focus on: (i) Publication and dissemination of the approved Strategic Plan, (ii) Finalization of the comprehensive survey of available capacities in the region, and development of a capacity building programme based on the results of the survey, (iii) Preparation of a follow-up project proposal, building ODINAFRICA-IV, (iv) Development of a proposal for an African Ocean Observing System, (v) Organization of an African Summer School on Coastal and Ocean Modelling and Forecasting, (vi) Development of an African node for the Ocean Teacher Academy Global Classroom project, (vii) Implementation of the project on "Enhancing oceanography capacities on Western Africa countries", (viii) Development of flagship projects based on the Strategic Plan, (ix) Preparation of new project proposals for submission to funding agencies such as the Climate Change Adaptation Fund, (x) Establishment of collaboration and formal links with other organizations and programmes, (xi) Organization of an African Marine Science Conference in collaboration with other partners, and (xii) Organization of the third Session of the Sub-Commission.
7. **The Sub-Commission elected** Dr Pierre Ricard Njike Ngaha (Cameroon) as Vice Chair for Group A, replacing Dr Jean Folack. The other members of the Bureau for the Sub-Commission would continue serving for the next inter sessional period and the third session of IOCAFRICA:

Chair:	Dr Monde Mayekiso (South Africa)
Vice Chair region A:	Dr Pierre Ricard Njike Ngaha (Cameroon)
Vice Chair Region B:	Mr Mohamudally Beebeejaun (Mauritius)
Vice Chair Region C:	Prof Mohamed Ahmed Said (Egypt)

8. **The Sub-Commission decided** to hold its next session in April 2014, and **welcomed** the offer of Egypt to explore the possibility of hosting the next session. The Sub-Commission thanked the Government of South Africa for hosting the session and funding all the local costs, and the Republic of Korea for the financial support provided for the organization of the session.
9. **The Sub-Commission adopted** three recommendations as follows:

Recommendation IOCAFRICA-II.1: IOC AFRICA STRATEGIC PLAN

Adopts the revised Draft of the Strategic Plan for the Sub-Commission, with amendments as agreed during the session;

Requests the Chair and the secretariat of the Sub-Commission to present the revised Draft of the Strategic Plan to the 27th session of the IOC Assembly for approval.

Recommendation IOCAFRICA-II.2: COLLABORATION WITH OTHER ORGANIZATIONS

Recommends that strong links be established with other relevant organizations, programmes and projects, in particular the:

- (i) African Union and its various ministerial conferences (e.g. AMCEN, AMCOMET, and AMCOST),
- (ii) Regional Economic Communities (e.g. COMESA, COI, EAC, ECCAS, ECOWAS and SADC)
- (iii) UNEP Regional Seas programmes covering Africa, and regional programmes of other UN agencies
- (iv) the African LME projects and Commissions
- (v) International and Regional NGOs (such as WIOMSA, IUCN and WWF)

Request the secretariat to explore the formalization of such collaboration through Memorandum of Understanding and Aide Memoires.

Recommendation IOCAFRICA-II.3: PROGRAMME OF WORK 2013–2015

Adopts the programme of work for the Sub-Commission for the period 2013–2015 with the following elements:

- (i) Publication and dissemination of the approved Strategic Plan for the Sub-Commission
- (ii) Finalization of the comprehensive survey of available capacities in the region (human resources, facilities and infrastructure, equipment etc.), and development of a detailed capacity building programme based on the results of the survey
- (iii) Preparation of a follow-up project proposal, building on the achievements of ODINAFRICA-IV for submission to the Flanders UNESCO Science Trust fund for consideration
- (iv) Development of a proposal for an African Ocean Observing System, building on work already done, and focussing on providing ocean observations and services for human and economic security.
- (v) Organization of an African Summer School on Coastal and Ocean Modelling and Forecasting
- (vi) Development of an African node for the Ocean Teacher Academy Global Classroom project,
- (vii) Implementation of the project on “Enhancing oceanography capacities on Western Africa countries” and extending its scope to other regions of Africa,
- (viii) Development of flag ship projects based on the Strategic Plan.
- (ix) Preparation of new project proposals for submission to funding agencies such as the Climate Change Adaption Fund
- (x) Establishment of collaboration and formal links with other organizations and programmes
- (xi) Organization of an African Marine Science Conference in collaboration with other partners
- (xii) Organization of the third Session of the Sub-Commission

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.

ANNEX I

(English only)

Recommendation IOCAFRICA-II.1**IOC AFRICA STRATEGIC PLAN**

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

Recalling that Resolution XXVI-3 of the 26th session of the IOC Assembly that established the Sub-Commission provided a broad outline on the mission, objectives, as well as the structure and functioning of the Sub-Commission,

Further recalling the establishment of the inter sessional working group, by the First session of the Sub-Commission, to prepare a draft strategic plan for the Sub-Commission taking into account the current challenges and the regional and international framework within which the Sub-Commission was created,

Expresses its appreciation to the Inter-sessional working group for their efforts in preparing the Draft Strategic Plan for consideration by the Sub-Commission;

Notes that the Strategic Plan is an important guiding tool for strengthening the Sub-Commission and developing its programmes and activities;

Further notes that the Strategic Plan for the Sub-Commission should follow the guidance provided by the Draft UNESCO Strategic Plan for 2014–2021, the UN *Oceans Compact*, and the elements of the IOC Strategic Plan for 2014–2021;

Adopts the revised Draft of the Strategic Plan for the Sub-Commission, with amendments as agreed during the session;

Requests the Chair and the secretariat of the Sub-Commission to present the revised Draft of the Strategic Plan to the 27th session of the IOC Assembly for approval.

Recommendation IOCAFRICA-II.2**COLLABORATION WITH OTHER ORGANIZATIONS**

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

Noting the importance of partnerships as a mechanism for joint planning and implementation of programmes, transfer of technology and exchange and sharing of resources,

Welcomes the offers of collaboration made by the organizations, programmes and projects represented at the session;

Recommends that strong links be established with other relevant organizations, programmes and projects, in particular the:

- (vi) African Union and its various ministerial conferences (e.g. AMCEN, AMCOMET, and AMCOST),
- (vii) Regional Economic Communities (e.g. COMESA, COI, EAC, ECCAS, ECOWAS and SADC)
- (viii) UNEP Regional Seas programmes covering Africa, and regional programmes of other UN agencies
- (ix) the African LME projects and Commissions

- (x) International and Regional NGOs (such as WIOMSA, IUCN and WWF)

Request the secretariat to explore the formalization of such collaboration through Memorandum of Understanding and Aide Memoires.

Recommendation IOCAFRICA-II.3

PROGRAMME OF WORK 2013–2015

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

Noting the progress made in the development of the Strategic Plan for the Sub-Commission,

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, especially the Governments of South Africa and Korea for support in organization of the second session of the Sub-Commission, the Government of Flanders, Belgium and Spain for their continued support for implementation of the Sub-Commission's activities;

Thanks the Member States from the region who have committed to secondment of staff and in-kind support for the Sub-Commission;

Adopts the programme of work for the Sub-Commission for the period 2013–2015 with the following elements:

- (xiii) Publication and dissemination of the approved Strategic Plan for the Sub-Commission
- (xiv) Finalization of the comprehensive survey of available capacities in the region (human resources, facilities and infrastructure, equipment etc.), and development of a detailed capacity building programme based on the results of the survey
- (xv) Preparation of a follow-up project proposal, building on the achievements of ODINAFRICA-IV for submission to the Flanders UNESCO Science Trust fund for consideration
- (xvi) Development of a proposal for an African Ocean Observing System, building on work already done, and focussing on providing ocean observations and services for human and economic security.
- (xvii) Organization of an African Summer School on Coastal and Ocean Modelling and Forecasting
- (xviii) Development of an African node for the Ocean Teacher Academy Global Classroom project,
- (xix) Implementation of the project on "Enhancing oceanography capacities on Western Africa countries" and extending its scope to other regions of Africa,
- (xx) Development of flag ship projects based on the Strategic Plan.
- (xxi) Preparation of new project proposals for submission to funding agencies such as the Climate Change Adaption Fund
- (xxii) Establishment of collaboration and formal links with other organizations and programmes
- (xxiii) Organization of an African Marine Science Conference in collaboration with other partners
- (xxiv) Organization of the third Session of the Sub-Commission

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.

ANNEX II

(English only)

ADOPTED AGENDA

1. WELCOME AND OPENING
2. ADMINISTRATIVE ARRANGEMENTS FOR THE SESSION
 - 2.1 ADOPTION OF THE AGENDA
 - 2.2 DESIGNATION OF THE RAPPORTEUR FOR THE SESSION
 - 2.3 CONDUCT OF THE SESSION, TIME TABLE AND DOCUMENTATION
- INVITED PRESENTATION NELSON MANDELA METROPOLITAN UNIVESITY
3. PRESENTATION ON IOC ACTIVITIES IN AFRICA 2008-2013 and UNESCO AND IOC PLANNING PROCESS 37 C4 AND 37C5
- INVITED PRESENTATION UNIVERSITY OF WESTERN CAPE
4. DRAFT STRATEGIC PLAN FOR THE SUB-COMMISSION
- INVITED PRESENTATION CAPE PENINSULA UNIVERSITY OF TECHNOLOGY
5. PRESENTATION OF RELEVANT ACTIVITIES OF OTHER ORGANIZATIONS/PROGRAMMES
 - 5.1 Benguela Current Commission
 - 5.2. Agulhas Somali Current Large Marine Ecosystem project
 - 5.3 UNEP Regional Seas programme – Abidjan Convention secretariat
 - 5.4 UNEP Regional Seas programme – Nairobi Convention secretariat
 - 5.5 Western Indian Ocean Marine Sciences Association
6. PROGRAMME OF WORK FOR IOC-AFRICA FOR 2013-2015.
7. ELECTIONS OF THE OFFICERS OF IOC- AFRICA
8. OTHER BUSSINESS
9. DATES AND PLACES OF THE 3rd SESSION OF THE IOC-AFRICA SUB-COMMISSION
10. ADOPTION OF THE DECISIONS/RECOMMENDATIONS AND SUMMARY REPORT
11. CLOSURE

ANNEX III

DRAFT STRATEGIC PLAN FOR THE IOC SUB-COMMISSION FOR AFRICA AND THE ADJACENT ISLAND STATES FOR 2014–2021

The IOC Executive Council at its 45th Session, through Decision EC-XLV/Dec 2.3-IV on Regional Subsidiary Bodies, accepted the Executive Summary Report of the first session of the IOC Sub-Commission for Africa and the Adjacent Island States (IOCAFRICA-I/3s) and the recommendations contained therein, including Recommendation IOCAFRICA-I.1 which:

- Established an Intersessional Working Group comprising of the IOCAFRICA Chair and three Vice-Chairs, IOC Vice-Chair Group V and experts co-opted as necessary to develop the draft Strategic Plan for the Sub-Commission,
- Recommended that the Inter-sessional Working Group undertakes wide consultation taking into account the current challenges and the regional and international framework within which the Sub-Commission was created, in order to come up with the appropriate draft;
- Requested the IOC secretariat to provide support to the Inter-sessional Working Group, including the preparation of background documentation and the organization of two meetings to enable the working group to finalize its task before the next session of the IOC Sub-Commission for Africa and the Adjacent Island States.

This version incorporates comments from the Second Session of the IOC Sub-Commission for Africa and the Adjacent Island States, Cape Town, South Africa, 3-4 April 2013.

MISSION AND VISION STATEMENTS OF THE SUB-COMMISSION

1. Following Annex to IOC Resolution XXVI-3,
 - (i) The Vision of the Sub-Commission is: to be the voice of Africa on matters related to ocean science and the science base for ocean management, providing 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;
 - (ii) The Mission of the Sub-Commission is as follows: Promote regional and international cooperation for the understanding and management of the African oceans and coastal ecosystems, in order to ensure sustainable development and safety of the coastal populations, taking into account the priorities of Member States from Africa

Background

2. The Intergovernmental Oceanographic Commission of UNESCO was established in 1960, through Resolution 2.31 of the UNESCO General Conference as a body with functional autonomy within UNESCO to “... *promote international cooperation and coordinate programmes in research, services and capacity building, in order to learn more about the nature and resources of the ocean and coastal areas; and to apply that knowledge for the improvement of management, sustainable*

development, the protection of the marine environment, and the decision-making processes of its Member States". Within the first year of IOC's existence six Africa countries (including Congo, Cote d'Ivoire, Ghana, Mauritania, Morocco and Tunisia) became member states of the Commission. The numbers increased as more African countries gained their independence, reaching the current total of 36 member states¹. This is almost one-quarter of the Commission's current membership.

3. The IOC's Regional Committee for the Central and Eastern Atlantic (IOCEA), was established in 1984 by the Executive Council at its Seventeenth Session through Resolution EC-XVII.7. The IOC Project Office for IOCEA operated from NIOMR, Lagos, Nigeria, from 2002 to 2004. The IOC's Regional Committee for the Western Indian Ocean (IOCWIO), was established in 1979 by the Assembly at its Eleventh Session through Resolution XI-9 as the IOC's Regional Committee for the Cooperative Investigations in the North and Central Western Indian Ocean (IOCINWIO). The name was later changed at the request of IOCINWIO-V. The IOC Project Office for IOCWIO established at KMFRI, Mombasa, Kenya from 2000 to 2004; was moved to the UNESCO Regional Office, Nairobi, Kenya, from 2004 to 2009).

4. The Regional Committees coordinated and facilitated the development and implementation of IOC activities in their respective regions. Through them, IOC has been an active participant in the implementation of programmes in the region, contributing to the development of scientific and technical capabilities, the strengthening of institutions, the installation and deployment of observing systems (e.g. sea level monitoring stations installed in Africa's coastal and island states), and the development of programmes and structures for addressing the regions priorities. The closure of the two project offices in 2004 (Lagos, Nigeria) and 2009 (Nairobi, Kenya) limited the ability of the Commission to link with national institutions and regional organizations/programmes, thus impacting negatively on the implementation of IOC activities in the region.

5. The IOC Assembly, at its 26th Session (June – July 2011, Paris, France) established the IOC Sub-Commission for Africa and the Adjacent Island States, as a framework to improve IOC visibility to facilitate coordination among Member States in the region, and to ensure the efficient implementation of IOC programme in Africa. The establishment of the Sub-Commission is fully in line with the African Union's regional integration principle, and will build on the strong marine and ocean networks, as well as the sub-regional programmes and organizations. It will strengthen IOC's presence in Africa, increase the effectiveness of its actions, and give concrete effect to the priority accorded to Africa by UNESCO. It is an important milestone in the development of marine sciences in the region, and marks a significant transformation in the way that the Commission engages with Member States from the region. An IOC Regional Office for Africa has been established at the UNESCO Nairobi Office to act as the Technical Secretariat for the Sub-Commission.

6. The first session of the IOC Sub-Commission for Africa and the Adjacent Island States, meeting on 2–3 May 2012 at the United Nations Office at Nairobi established an Intersessional Working Group comprising of the IOCAFRICA Chair and three Vice-Chairs, IOC Vice-Chair Group V and experts co-opted as necessary to develop the draft Strategic Plan for the Sub-Commission. The session recommended that the Inter-sessional Working Group undertakes wide consultation taking into account the current challenges and the regional and international framework within which the Sub-Commission was created, in order to come up with the appropriate draft. This recommendation was endorsed by the IOC Executive Council at its 45th session (June 2012, Paris, France), which also requested the IOC secretariat to provide support to the Inter-sessional Working Group.

7. The Inter sessional Working Group prepared a draft document, which was reviewed by the Second session of the IOC Sub-Commission for Africa and the Adjacent Island States (Cape Town, South Africa, 3-4 April 2013).

¹ *Algeria, Angola, Benin, Cameroon, Cape Verde, Comoros, Congo, Cote d'Ivoire, Democratic Republic of the Congo, Djibouti, Egypt, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Libya, Madagascar, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Togo, Tunisia, and the United Republic of Tanzania.*

SITUATION ANALYSIS

8. The African coasts span two oceans and two seas with plenty of coastal and marine resources, including fisheries, minerals and hydrocarbons. Some of the important coastal and marine resources of Africa are overexploited and are experiencing degradation. There is pressure to increase fish output in order to feed an increasing population. Offshore Oil and gas exploration has gained importance, with significant discoveries reported in several parts of the continent. Mangrove areas are declining as a result of uncontrolled harvesting for timber and fuel wood, construction of hotels and salt pans, and pollution from oil and industrial waste, especially around major ports. Coral reefs have been continually declining. Blast fishing and agricultural runoff also pose significant threats.

9. Sub-Saharan Africa has the world's highest urban population expansion rate – about 5% per year – Rapidly expanding coastal cities have a growth rate of 4%. This is the case of cities like Lagos (Nigeria), Accra (Ghana), Abidjan (Cote d'Ivoire), Dakar (Senegal), Mombasa (Kenya), and Dar es Salaam (Tanzania). Indeed in West Africa, almost 40% of the population reside in coastal cities. Such degrees of urbanization along the coastline have increased the level of degradation and pollution in coastal and marine ecosystems. For example off East Africa, most documented damage to coastal habitats occurs near major towns and cities, due to sewage discharge and overexploitation. However it also demonstrates the livelihood opportunities that oceans and coastal ecosystems provide.

10. The coastal zones are becoming increasingly important with industries such as energy extraction, fisheries, and tourism playing a key role in the economies of coastal countries, including poverty alleviation. This necessitates a holistic approach to address land-based sources of pollution, and all aspects of exploitation of living and non-living resources. Governments are in turn becoming more sensitive to the emerging problems and are seeking mechanism to address them.

11. However marine institutions in Africa particularly suffer from limited financial resources and poor coastal and ocean observation infrastructure (platforms and equipment). Other constraints include limited human resources (need for capacity development), insufficient data and information for managing coastal resources and decision making (including long-term monitoring data for climate and climate change studies), and the limited collaboration between institutions in the region in addressing common concerns. Piracy in parts of the coasts not only limits the ability of research vessels to undertake cruises for data collection, but also impacts on sustainable development and environmental management. This is compounded by the diversity of official languages used on the continent, which lessens the opportunities for exchange of experiences and information. The wide variation in the characteristics of the oceans and seas around Africa will also pose a challenge in the developing of programmes for IOCAFRICA.

UNESCO and IOC's Initiatives in the region

12. UNESCO and its IOC have been actively involved in the development of marine sciences in Africa, and undertook the first comprehensive study on the "Development of Marine Science and Technology in Africa" in 1980–1981 in collaboration with the United Nations Economic Commission for Africa (UNECA), with funding from UNDP.

13. The Pan African Conference on Sustainable Coastal Management (PACSICOM) held in Maputo, Mozambique from 18–28 July 1998, was organized by UNESCO/IOC as part of the International Year of the Ocean activities.

14. IOC was actively involved in the development and implementation of a GEF Medium-sized project (MSP) entitled "*Development and Protection of the African Coastal and Marine Environment in Sub Saharan-Africa*" – commonly known as **the African Process**, in partnership with the Advisory Committee on Protection of the Seas – ACOPS and UNEP. The African Process resulted in an integrated problem analysis of issues impacting on the coastal and marine environment and development of a portfolio of 19 projects addressing five priority areas identified: coastal erosion, pollution, sustainable use of living resources, management of key habitats and

ecosystems, and tourism. The outputs of this initiative, led by African experts was presented to, and endorsed by the partnership conference held during the World Summit on Sustainable Development in Johannesburg, South Africa in September 2002 and attended by Heads of State from Africa and representatives of the donor community. Several of the projects have since been funded and implemented by local institutions and international agencies, thus contributing to addressing of the priority concerns identified.

15. The development of the Ocean Data and Information Network for Africa (ODINAFRICA), funded by the Government of Flanders, Belgium has been one of the major initiatives of IOC in the region. Starting with the project on Regional Cooperation in Scientific Information Exchange in the Western Indian Ocean (RECOSCIX-WIO), implemented in Eastern Africa from 1989, and focussing on exchange and sharing of scientific literature, by 2000 the project had expanded its scope to cover the whole of Africa, and include all aspects of ocean data and information management and exchange. Some of the achievements of the project, which is currently in its fourth phase, include the establishment of National Oceanographic Data and Information Centres (including provision of equipment, software and training), establishment of the African Sea-level network (currently comprising more than 30 sea-level stations), development of directories of experts and institutions, oceanographic databases, the African Marine Register of Marine Species, and Coastal and Marine Atlases. The network established has enhanced collaboration between experts and institutions in the region, leading to development of projects and initiatives addressing trans-boundary issues.

16. IOC collaborated with the Swedish International Development Authority- SIDA to implement a range of capacity building initiatives, including workshops and training courses, development of manual and guidelines and provision of equipment and software. A wide range of topics was covered such as coastal erosion, harmful algal blooms, sea level change, modelling and remote sensing, leadership and team building.

17. The regional project on Adaptation to Climate and Coastal Change in West Africa (ACCC) is a project funded by the Global Environment Facility (GEF), and implemented by IOC and UNDP to assist Member States to cope with climate change impacts in coastal areas and specifically related effects such as coastal erosion. This project is a component of the NEPAD Plan on Environment and focused on coastal sites located in Mauritania, Senegal, Gambia, Guinea Bissau, and Cape Verde. This West African coastal zone is a highly productive ecosystem of significant marine biological diversity and hosts a number of protected areas containing globally significant biodiversity. Pilot activities were implemented at selected sites with the aim of reducing the threat of coastal erosion, while increasing biodiversity and strengthening the adaptive capacities of local communities and ecosystems. The project also included climate change considerations in different development plans – for example, tourism strategies and master plans for coastal towns.

18. Other initiatives that have been implemented by IOC in the region include the Indian Ocean Tsunami Early Warning and Mitigation System - IOTWS, the Tsunami Early Warning and Mitigation System in the North-eastern Atlantic, the Mediterranean and connected seas – NEAMTWS, the Harmful Algal Bloom programme (HAB), the International Bathymetric Charts of the Western Indian Ocean (IBCWIO) and the Central Eastern Atlantic (IBCEA), and the Coastal Mapping Capacity Building in the Indian Ocean- COASTMAP-IO.

Other UN initiatives, including the Large Marine Ecosystem Projects.

19. The Large Marine Ecosystem –LME projects– have been major players in the study and management of coastal areas of Africa. The implementation of these projects have been coordinated by various UN and related agencies as follows:

- (i) The Agulhas and Somali Current Large Marine Ecosystem programme (ASCLME): This was a multi-project, multi-agency programme- which aims to institutionalise cooperative management of the two LMEs. The Programme's overall objectives were: (a) to acquire sufficient baseline data to support an ecosystem-based approach to the management of the two LMEs; and (b) to produce a TDA and SAP for both the Agulhas Current and the Somali

Current LMEs. The three projects were: The Western Indian Ocean Land Base activities Project (WIO-Lab) coordinated by UNEP, the Agulhas Somali Current LME project coordinated by UNDP, and the South Western Indian Ocean Fisheries Project (SWIOFP) coordinated by the World Bank.

- (ii) The Benguela Current LME programme was designed to improve the structures and capacities of Namibia, Angola and South Africa to deal with the environmental problems that occur across the national boundaries, in order that the Benguela Current Large Marine Ecosystem may be managed as a whole. The implementation of the programme was coordinated by UNDP. The Benguela Current Commission has been established to build on the achievements of BCLME. This is currently the only LME Commission.
- (iii) The Canary Current Large Marine Ecosystem (CCLME) project is unique in its strategic combination of fisheries and ecosystem governance frameworks and will, through governance reforms, investments and management programs, enable the participating countries to address priority trans boundary concerns on declining fisheries, associated biodiversity and water quality. CCLME project is executed by the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Environment Programme (UNEP) in a combined effort to reverse the degradation of the Canary Current large marine ecosystem caused by over-fishing, habitat modification and changes in water quality by adoption of an ecosystem-based management approach.
- (iv) The Guinea Current LME project, implemented by the United Nations Industrial Development Organization (UNIDO) focussed on “Combating Living Resources Depletion and Coastal Area Degradation in the Guinea Current Large Marine Ecosystem”. The long-term development goals of the project are: (a) recover and sustain depleted fisheries, (b) restore degraded habitats; and (c) reduce land and ship-based pollution by establishing a regional management framework for sustainable use of living and non-living resources in the GCLME. Priority action areas include reversing coastal area degradation and living resources depletion, relying heavily on regional capacity building.

20. The Caucus of African Large Marine Ecosystem (LME) projects was formalized at a meeting that took place in Accra, Ghana in May 2011, and brings together four LME projects implemented along the African coasts: Canary, Guinea, Benguela and Agulhas & Somali Currents. The purpose of the Caucus is to foster closer cooperation among African LME projects on issues of common concern, learning and sharing experiences, improving communication and coordination and developing ways to work in synergy. IOC has worked closely with the LME projects in implementing activities. An Aide Memoire has been signed with the ASCLME project, while similar arrangements are under discussion with the other LME projects.

21. The Food and Agricultural Organization of the United Nations (FAO) has been implementing the EAF-Nansen Project on “Strengthening the Knowledge Base for and an Ecosystem Approach to Marine Fisheries in Developing Countries”. The main objective of this project is to expand the scientific knowledge base on marine ecosystems, strengthen the link between marine science and fisheries management, and contribute to capacity building through on-vessel and in-country training programmes. From 1975 the NORAD-funded Nansen Programme (NP) carried out fisheries resources and environment surveys in developing countries in Africa, Asia and Latin America using the UN-flagged research vessel Dr Fridtjof Nansen operated by the IMR (Institute of Marine Research) of Bergen, Norway. In December 2006 the programme was transformed into the EAF-Nansen project to build capacity of developing countries towards EAF (ecosystem approach to fisheries) management (including undertaking ecosystem surveys with the R/V Dr Fridtjof Nansen). The project is a partnership between the Norwegian Agency for Development Cooperation (Norad), Institute of Marine Research of Bergen, Norway (IMR), and the Food and Agriculture Organization of the United Nations (FAO). The EAF-Nansen Project and its

predecessor projects have over the years developed into a unique mechanism for cooperation, knowledge and lesson learning in marine ecosystem assessment and monitoring in the developing world, especially in Sub-Saharan Africa. With nearly 38 years of observational data and information on the marine environment and fisheries resources in Africa, and its present focus on climate-related changes in the marine ecosystems and effect on biodiversity, the EAF-Nansen project is in a unique position to contribute to the programme of work of the IOC Sub-Commission for Africa and the adjacent Island States (IOC-Africa).

22. Other UN agencies such as the World Meteorological Organization, the International Maritime Organization, and the International Hydrographic Organization have also implemented marine related programmes in Africa.

PRIORITY ISSUES

23. The most comprehensive assessment of priority issues was undertaken in the framework of GEF Medium-sized project (MSP) entitled “Development and Protection of the African Coastal and Marine Environment in Sub Saharan-Africa” (the African Process), implemented by IOC in partnership with the Advisory Committee on Protection of the Seas – ACOPS and UNEP. Eleven countries from different regions of the continent (Côte d’Ivoire, the Gambia, Ghana, Kenya, Mauritius, Mozambique, Nigeria, Senegal, Seychelles, South Africa, and Tanzania) were involved in this initiative which resulted in an integrated problem analysis of issues impacting on the coastal and marine environment and development of a portfolio of 19 projects addressing five priority areas identified: coastal erosion, pollution, sustainable use of living resources, management of key habitats and ecosystems, and tourism. The outputs of this initiative, led by African experts was presented to, and endorsed by the partnership conference held during the World Summit on Sustainable Development in Johannesburg, South Africa in September 2002 and attended by Heads of State from Africa and representatives of the donor community. Several of the projects have since been funded and implemented by local institutions and international agencies, thus contributing to addressing of the priority concerns identified.

24. Other assessments have done at the sub-regional level, mainly the trans boundary diagnostic analysis done by LME projects. The table below provides an over-view of some of the issues identified:

African Process	GCLME	BCLME	WIO-LaB's TDA	ASCLME/ SWIOFP
<ul style="list-style-type: none"> ▪ The loss/modification of ecosystems ▪ The over-exploitation of resources ▪ The modification of stream flow ▪ The use of destructive fishing practices 	<ul style="list-style-type: none"> ▪ Decline in GCLME fish stocks and non-optimal harvesting of living resources ▪ Loss of ecosystem integrity and yields in a highly variable environment including effects of global climate change ▪ Deterioration in water quality ▪ Habitat destruction and alteration 	<ul style="list-style-type: none"> ▪ Decline in BCLME commercial fish stocks and non-optimal harvesting of living resources ▪ Uncertainty regarding ecosystem status and yields in a highly variable environment ▪ Deterioration in water quality - chronic and catastrophic ▪ Habitat destruction and alteration ▪ Loss of biotic integrity and threat to biodiversity/endangered and vulnerable species ▪ Inadequate human and infrastructure capacity to assess the health of the ecosystem ▪ Harmful algal blooms (HABs) 	<ul style="list-style-type: none"> ▪ Water and sediment quality degeneration due to pollution from land-based sources ▪ Physical alteration and destruction of habitats ▪ Alteration in freshwater flows and sediment loads from rivers 	<ul style="list-style-type: none"> ▪ Water Quality Degradation ▪ Habitat and Community Modification ▪ Declines in Living Marine Resources ▪ Unpredictable environmental variability and extreme events

INTERNATIONAL AND REGIONAL FRAMEWORKS

25. The countries of the region are signatories to various international agreements which impact on the management of the marine environment and resources, including: (i) London Dumping Convention (1972), (ii) International Convention for the Prevention of Pollution from Ships – MARPOL (1973), (iii) The Rio Conventions – UNFCCC and CBD (1992), (iv) the FAO Code of Conduct for Responsible Fisheries – CCRF (1995), (v) United Nations Agreement on Straddling Fish Stocks and Highly Migratory Fish Species (1995), (vi) Global Programme of Action for the Protection of the Marine and Coastal Environment from Land Based Activities - GPA/LBA (1995), (vii) Jakarta Mandate on Marine and Coastal Biodiversity (1995)

26. Conventions and Commissions have also been established at the sub-regional to address marine related issues. These include:

- The UNEP Regional Seas Conventions, which aims to address the accelerating degradation of the world's oceans and coastal areas through the sustainable management and use of the marine and coastal environment, by engaging neighbouring countries in comprehensive and specific actions to protect their shared marine environment. It has accomplished this by stimulating the creation of Regional Seas programmes prescriptions for sound environmental management to be coordinated and implemented by countries sharing a common body of water. The UNEP Regional Seas programmes covering the African coasts include: (i) The Convention for Co-operation in the protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention), (ii) The Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi Convention), (iii) the Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment with the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden–PERSGA, established as the coordinating body for its implementation (Jeddah Convention), and (iv) The Convention for the protection of the Mediterranean Sea against Pollution (Barcelona Convention). The Sub-Commission has already established links with the Abidjan and Nairobi Conventions and should explore similar links with the Barcelona and Jeddah Conventions.
- The fisheries commissions such as: Commission Sous Régionale des Pêches, (CSRP), Comité Régional des Pêches du Golfe de Guinée, (COREP), South East Atlantic Fisheries Organization (SEAFO), Regional Fishery Committee for the Eastern Central Atlantic (CECAF), South West Indian Ocean Commission (SWIOC), and the Indian Ocean Tuna Commission (IOTC).

27. The African Union Commission and the Regional Economic Communities provide important fora for addressing issues affecting the African countries. The African Union is developing the “2050 Africa's Integrated Maritime Strategy – 2050 AIM STRATEGY” which aims to foster more wealth creation from Africa's oceans, seas and inland water ways by developing a thriving maritime economy and realizing the full potential of sea-based activities in an environmentally sustainable manner. The strategy recognises the need for capacity building in maritime education and scientific research (hydrography, oceanography, fisheries, coastal and inland training research and transfer of technology). It proposes collaboration with the Intergovernmental Oceanographic Commission of UNESCO.

28. Non-Governmental Organizations, both International and Regional, also provide a useful mechanism for implementation of marine related activities. The World Conservation Union (IUCN), and the World Wildlife Fund for Nature (WWF) have programmes across the continent. IOC has worked closely with the Western Indian Ocean Marine Sciences Association –WIOMSA, in implementing a wide range of activities including capacity surveys, sea level data analysis, oceans and climate studies, enhancing collaboration between oceanographers and climate experts to assist in generating more accurate seasonal weather and climate forecasts and participation in regional climate outlook forums and leadership workshops. IOC and WIOMSA co-sponsored the

establishment of the Forum for Heads of Academic and Research Institutions – FARI, in the Western Indian Ocean region.

RELEVANT UN, UNESCO AND IOC PLANNING PROCESSES

29. The United Nations Conference on Sustainable Development – UNCSD (also known as Rio+20) held in Rio de Janeiro, Brazil, in June 2012 renewed the commitment of governments to sustainable development, and to ensuring the promotion of an economically, socially and environmentally sustainable future for our planet and for the present and future generations. The UNCSD outcomes document - “The Future We Want” recognized that the oceans, seas and coastal areas form an integrated and essential component of the Earth’s ecosystem and are critical in sustaining it. UNCSD stressed the importance of the conservation and sustainable use of the oceans and seas and their resources for sustainable development including through the contributions to poverty eradication, sustained economic growth, food security, creation of sustainable livelihoods and decent work, while at the same time protecting biodiversity and the marine environment and addressing the impacts of climate change.

30. The “Oceans Compact: Healthy Oceans for Prosperity”, which was launched by the United Nations Secretary General in August 2012 sets out a strategic vision for the UN system to deliver on its ocean-related mandates, consistent with the Rio+20 outcome document “The Future we Want” in a more coherent and effective manner. It aims to provide a platform for all stakeholders to collaborate and accelerate progress in the achievement of the common goal of “Healthy Oceans for Prosperity. Three inter-related themes advance this goal: (i) Protecting people and improving the health of the oceans; (ii) Protecting, recovering and sustaining the oceans’ environment and natural resources and restoring their full food production and livelihoods services; and (iii) Strengthening ocean knowledge and the management of ocean. These objectives must be underpinned by a robust global ocean observation and knowledge infrastructure and the successful operation of the UN World Ocean Assessment.

31. The over-arching objectives of the UNESCO Medium Term Strategy for the period 2014–2021, which is currently being developed, will focus on contribution to lasting peace, and sustainable development and the eradication of poverty. Africa and Gender Equality will continue to be UNESCO’s global priority during this period. The proposed strategic objectives for the science programmes are: (i) Bolstering the interface between science, policy and society, building capacities, and supporting the development of policies for sustainable development; and (ii) strengthening international science cooperation for peace, sustainability and inclusion.

32. IOC is also developing a Medium-Term Strategy for the same period, responding to the strategic objectives of the UNESCO’s programme by “Promoting knowledge and capacity for protecting and sustainably managing the oceans and coasts”. IOC proposes to focus on the broad areas of: (i) Strengthening scientific understanding of ocean and coastal processes in a changing environment through research and systematic ocean observations; (ii) Developing capacities in early warning, services, and assessment to reduce risks and impacts of ocean-related hazards; (iii) support climate adaptation and mitigation; and (iv) sustain healthy ocean ecosystems and Building institutional capacities for sustainable ocean management and governance.

OBJECTIVES AND EXPECTED RESULTS FOR THE SUB-COMMISSION 2014-2021

33. The Objectives of the Sub-Commission shall be in line with the Annex to IOC Resolution XXVI-3.

34. IOC aspires to help Member States to collectively achieve the following objectives: (i) Healthy ocean ecosystems and sustained ecosystem services; (ii) Effective early warning systems and preparedness for tsunamis and ocean-related hazards; (iii) Increased resiliency to climate change and variability through scientifically-founded services, adaptation and mitigation strategies; (iv) Enhanced knowledge of emerging ocean science issues; and (v) Improved Capacity for sustainable management of the ocean and coastal zone.

35. In line with these, and the global expected results of IOC, the Sub-Commission will focus on achieving the following results:

Global Expected Result 1: Scientific understanding of ocean and coastal processes strengthened through research and systematic ocean observations.	
Regional Expected Result 1. Increased understanding of ocean and coastal processes around Africa, and how they impact on environment and resources.	Integrated management of marine and coastal resources is essential for balancing competing needs and will contribute to poverty alleviation and sustainable development in Africa. Access to reliable data and information is crucial for this process. The Ocean Observing System for Africa should focus on "ocean information for human and economic security". The major issues that the observations should address include: (i) Food security and fisheries, (ii) Early warning for ocean related hazards and disaster risk reduction, (iii) ecosystem services and sustainability, (iv) coastal management and governance (v) Climate variability/change and adaptation, and (vi) education and training. GOOS Africa should be aligned to GOOS Framework for Ocean Observing and the IOC Sub-Commission for Africa and the Adjacent Island States.

Global Expected Results 2: Capacities in early warning, services and assessment to reduce risks and impacts of ocean related hazards, support climate adaptation and mitigation, and sustain healthy ocean ecosystems developed.	
Regional Expected Result 2. Increased technical capacity for monitoring and early warning for coastal and oceanic natural hazards	Sea level stations have been installed at various locations along the African coastline that can serve as a nucleus for an early warning system. New stations have been installed on the African coast at Djibouti (Djibouti), Pointe Noire (Congo), Limbe (Cameroun), Lagos (Nigeria), Takoradi (Ghana), Dakar (Senegal), Nouakchott (Mauritania), and Alexandria (Egypt). Takoradi has the earliest records available on the African coast.
Regional Expected Result 3. Improved understanding of how African Oceans and Coastal areas will be impacted by changing climates	Climate change is projected to lead to loss of important coastal habitats, infrastructure along the African coasts (ports, tourism infrastructure, fishery landing sites, etc.). Natural phenomenon, exacerbated by Climate Change/sea level rise and inadequate use of the coastal space. It will be important to understand how the African oceans and coastal areas will be impacted by the changing climates.
Regional Expected Result 4. Enhanced preparation by member states and coastal communities to and mitigate the impacts of coastal hazards and climate change.	IOC conducted a programme of capacity development in East African and Western Indian Ocean countries to assist them in the fields of tsunami hazard and risk assessment, coastal inundation modeling, and the development of Standard Operating Procedures (SOP) for tsunami warning and emergency response. In West Africa a project on Adaptation to Climate and Coastal Change was implemented in the countries of the Canary Current LME region

Global Expected Results 3: Institutional capacities for sustainable ocean management built	
Regional Expected Result 5. Marine and oceanographic training and research institutions strengthened	The strengthening of institutional capacities to enable them effectively discharge their mandates is another priority area for IOC. IOC in collaboration with WIOMSA and the Forum for Heads of Academic and Research Institutions (FARI) organized a series of Advanced Leadership Workshops for Heads of Marine related institutions. Leaders and senior role players were provided with training empowering them with the skills to identify, collaborate, plan and implement change in the institutes and make them more sustainable and better serve their national stakeholders.

Global Expected Results 3: Institutional capacities for sustainable ocean management built	
	IOC supports UNESCO Chairs in marine science fields at the Eduardo Mondlane University in Mozambique and the University of Dar es Salaam in Tanzania. There is still need for improvement of infrastructure and facilities for training and research
Regional Expected Result 5: Creation of critical mass of marine science professionals, to identify and address key issues relevant to Africa.	Progress has been achieved in capacity development for marine sciences in the region, through national efforts and the support of IOC and other organizations, there is still need for high level training at MSc/PhD level. Interventions should be initiated to retain trained manpower, and facilitate the utilization of available expertise, including the African diaspora. It is important to integrate oceanography training in the universities, and link with the education sector to introduce oceanography in the curriculum at lower levels (secondary schools and undergraduate)

36. The Implementation Plan (including performance indicators, benchmarks and timeframes) is provided in Annex I.

MEANS OF DELIVERY

37. The Sub-Commission will work closely with Member States from the region and partners in the implementation of the strategy, in cooperation with other partners and stakeholders.

38. The extended geographic coverage of Sub-Commission and the wide variations of the characteristics of the oceans and seas around Africa will pose a management challenge for the IOC Regional Office for Africa located in Nairobi, which has limited staffing. The Office should explore the possibility of working closely with the other UNESCO Offices in Africa. The establishment of five UNESCO regional multi-sectoral offices in Africa (Nairobi for East Africa, Yaoundé for Central Africa, Abuja for West Africa, Dakar for the Sahel part of West Africa, and another office for Southern Africa at a location to be agreed by Member States from the region) as part of the UNESCO field reform programme, provides an opportunity to link the Sub-Commission's programme with the Regional Economic Communities.

39. The Sub-Commission will focus on the following five areas in order to achieve its objectives: (i) Knowledge generation and management; (ii) Capacity development; (iii) Developing Partnerships; (iv) Advocacy and Public Awareness; and (v) Resource Mobilization.

40. The Sub-Commission will set-up five working groups covering the following sub-regions: Agulhas-Somali Current LME, Benguela Current LME, Guinea Current LME, Canary Current LME, and the Mediterranean and Red Sea regions. These working groups will assist in developing detailed plans and provide linkages to other organizations and programmes in the sub-regions. This will enable the Sub-Commission to address the regional priorities and specificities.

Knowledge generation and management

41. The information available on the African oceans and coasts has increased in recent years as a result of several national, regional and international initiatives. Research cruises have been organized in the framework of international programmes, collecting data on fisheries and oceanography, sea level stations have been installed at key locations on the African coasts, national institutions have implemented surveys covering a wide range of topics such as pollution, fisheries, coastal erosion etc.

42. However much still needs to be done to generate sufficient data, and to analyse the data and prepare products essential for integrated and sustainable management of the marine and coastal environment and resources.

43. The efforts should include the generation of new data, the analysis and interpretation of large volumes of data generated from numerous cruises in the region in the past, and the processing and archiving of data to provide baseline information for future studies.

44. The Sub-Commission should ensure that Africa benefits from IOC's global programmes. Africa must move from token participation and attain equitable participation in the programmes.

Capacity Development

45. Though progress has been achieved in capacity development for marine sciences in the region the last 20 years through national efforts and the support of IOC and other organizations, a critical mass of experts is still not available in many of the African coastal countries. There is still need for high-level training, and improvement of infrastructure for training and research.

46. The comprehensive assessment of capacities available and the capacity building needs will be undertaken by the Sub-Commission, taking into account previous surveys. The survey should also define the critical mass of expertise required in each field/level and assess the shortfall. This assessment will form the basis for interventions to strengthen capacities in the region, and will be used as a baseline to assess future progress.

47. The elements of the capacity development programme should include the following:

- (i) Strengthening marine science laboratories to be engaged in marine science observations, monitoring and applications
- (ii) Strengthening existing or creating new university programmes to educate the next generation of leaders.
- (iii) Strengthen UNESCO Chairs as a tool for capacity development and establishing centres of excellence (e.g. African node for the Ocean Teacher Global Classroom)
- (iv) Organisation of focussed training, such as workshops and "summer schools", addressing specific needs identified by Member States.
- (v) Continuous professional development to ensure that scientists and technical staff keep up to date with new developments in their fields (including fellowships/scholarships, participation in conferences, researcher mobility programmes).
- (vi) Ensuring equitable participation of African marine scientists in IOC programmes and other global ocean research and observation programmes.
- (vii) Collaboration with other IOC Sub-Commissions (IOC-WESTPAC and IOCARIBE) in capacity development.

48. The focus should be on training young generation of scientists to ensure that marine sciences have a strong foundation. The UNESCO Chairs should be reinforced and utilised for this, and mechanisms should be developed to enable the Chairs to use the expertise of the African diaspora. Other ways of using the diaspora should be explored.

49. Training (skills acquired) will not be used if there is no improvement in work environment (facilities and equipment). The inclusion of a component for follow-up after training will address this. Though the Sub-Commission should draw on the experiences from different parts of the world, Africa should be in charge of the training efforts on the continent – including identifying the priorities.

Partnerships

50. In line with the Sub-Commission's vision of providing a platform bringing together member States, UN agencies and other stakeholders, partnerships will be an important tool for joint

planning and implementation, transfer of technology and exchange and sharing of resources. Previous collaboration with WIOMSA, the ASCLME project, Benguela Current Commission, the IGAD Climate Prediction and Application Centre etc. have demonstrated that much can be achieved when organizations/programmes work together and benefit from synergy. The Sub-Commission should therefore create new partnerships and strengthen existing partnerships with different actors in the region, including regional and international bodies and programmes/projects. The following will in particular be explored:

- Intergovernmental Organizations: This includes the African Union Commission and the Regional Economic Commissions, the UNEP Regional Seas secretariats for the Abidjan and Nairobi Conventions, the Benguela Current Commission, Indian Ocean Commission, Indian Ocean Tuna Commission, International Hydrographic Organization, International Maritime Organization etc.
- Non-Governmental Organizations such as the Western Indian Ocean Marine Science Association, WWF, IUCN.

51. The partnerships should be well structured – e.g. through Memorandum of Understanding, Exchange of Information or representation in meetings/activities. Partnerships should be based on mutual benefit, and the responsibilities of each partner (who does what, pays for what, etc.) documented in a MoU, aide memoire, etc.). Once the IOCAFRICA Strategic Plan is finalized, a high level delegation should be sent to potential partners to explore opportunities for collaboration.

52. The Sub-Commission should organize an African Marine Science Conference in partnership with other organizations and programmes. This could serve as a forum for reviewing achievements of the African experts and institutions and charting the way forward.

Resource Mobilization

53. The Sub-Commission should receive more resources from the IOC Regular Programme budget, in line UNESCO global priority on Africa. However with declining UNESCO budgets the Sub-Commission should also explore alternative sources of funding.

54. The Sub-Commission should initiate a study to explore the possibility of getting country contributions to its activities. The starting point will be to establish operational costs for the Sub-Commission (including staff). This will determine the amounts to be contributed by the member states. The study will also look at how this can be operationalized.

55. In-kind contributions from member states in the region, including staff, should be encouraged in order to strengthen the Sub-Commission.

56. The Sub-Commission should spearhead the development of products in collaboration with different sectors and industries, which could in turn co-sponsor implementation of activities in areas where their interests converge with those of the Sub-Commission. Potential partners in such initiatives include the Ports Authorities and the Oil/gas industries.

Public Awareness and Advocacy

57. The Sub-Commission should develop and strengthen the links between the scientific community and governments and other users of the ocean data and information and products generated in the region. The development of a strong user community will create a constituency that will support the work of the Sub-Commission.

58. There is wide range of audiences, with different requirements, ranging from the school children, college and university students, researchers and resource managers, policy and decision makers. Each of these groups requires information with different level of details and packaged in different ways.

59. The following are some of the communication tools that should be implemented in improve awareness:

- (i) Production of periodic status reports on topical issues targeting decision makers (policy briefs, technical reports)
- (ii) Organization of a regular African Conference of Marine Science
- (iii) Publication of a journal for marine science
- (iv) Organization of special events and ocean related sessions (e.g. side events at Heads of State and ministerial meetings such as African Union Commission, AMCEN, and AMCOST etc.)
- (v) Production of technical reports (e.g. status report on impacts of climate change – bring experts to write book on this?)
- (vi) Preparation of publicity and public awareness materials e.g. posters/brochures, leaflets, documentaries, TV programmes etc.

60. The Sub-Commission should actively market itself through wide dissemination of products and engagement with the different categories of users of its products.

MONITORING AND EVALUATION

61. Carrying out periodic assessment and tracking of the overall efforts of the Sub-Commission particularly capacity development, should include objective analysis of impacts, efficiency, competitiveness and effectiveness of the strategies and measures being used. There should be flexibility in order to adapt these measures to reflect changing and emerging priorities, if necessary.

62. In this respect, periodic Progress Reports are important tools in examining the effectiveness and efficiency of the Sub-Commission's programmes of actions.

63. The first evaluation of the progress and achievements of the Sub-Commission should be carried out at the end of the two year of the Commission's work, using the participatory approach of self-evaluation and involving designated members of the Sub-Commission's Bureau (Chair and three Vice Chairs), the IOCAFRICA Coordinator and Responsible Professional Officers, in addition to a limited number of representatives of the major partners and donors.

64. The self-evaluation would present an opportunity for the Sub-Commission to identify any problems encountered in the implementation of the work plan, suggest solutions to these problems, and adapt the course of action accordingly.

65. Subsequently joint evaluation 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.

ANNEX I: IMPLEMENTATION PLAN

Global Expected Result 1: Scientific understanding of ocean and coastal processes strengthened through research and systematic ocean observations.						
REGIONAL EXPECTED RESULTS	INDICATIVE ACTION	KEY PERFORMANCE INDICATOR	BENCHMARKS	SUB-COMMISSION TARGETS		
				2015	2017	2021
Regional Expected Result 1. Increased understanding of ocean and coastal processes around Africa, and how they impact on environment and resources.	Development and implementation of an Ocean Observing System for Africa, providing sustained ocean observations and services for human and economic security	Detailed proposal for the African Ocean Observing System, and implementation schedule		Detailed proposal 25% implementation of observing system	50% implementation	80% implementation.
	Participation of African experts in oceanographic cruises organized by African and other institutions in African ocean and coastal waters.	No of cruises Volume of data available in NODCs		@ least one regional cruise a biennium		
	Analysis and interpretation of data generated from observations and research, and dissemination of results to users	No of publications from African ocean experts and institutions			No of publications in refereed journals doubled	No of publications in refereed journals tripled
Global Expected Results 2: Capacities in early warning, services and assessment to reduce risks and impacts of ocean related hazards, support climate adaptation and mitigation, and sustain healthy ocean ecosystems developed						
REGIONAL EXPECTED RESULTS	INDICATIVE ACTION	PERFORMANCE INDICATOR	BENCHMARKS	SUB-COMMISSION TARGETS		
				2015	2017	2021
Regional Expected Result 2. Increased technical capacity for monitoring and early warning for coastal and oceanic natural hazards	Upgrade and maintenance of the African Sea level network	No of GLOSS and other Sea level stations established and sustained along the African coast		10% increase in installed sea level stations	All GLOSS stations installed & operational	
	Implementation of a robust near-real time data exchange platform for the assimilation of data from ocean sensors to feed into weather prediction and early warning systems Monitoring programme for potentially Harmful Algal Bloom	No of sensors feeding in weather prediction & early warning systems No of LME regions with baseline HAB survey		Proposal for data exchange platform developed	Data exchange platform operational Baseline HAB surveys done in all LME regions	
Regional Expected Result 3. Improved understanding of how African Oceans and	Development of climate change scenarios, and adaptation strategies	Scenarios and adaptation strategies		Scenarios and adaptation strategies	Scenarios and adaptation strategies for 3	Scenarios and adaptation strategies

Coastal areas will be impacted by changing climates				developed for 2 LME regions	LME regions	developed for all the LME regions
Regional Expected Result 4. Enhanced preparation by member states and coastal communities to and mitigate the impacts of coastal hazards and climate change.	Development and validation of products necessary for management of coastal zone, and mitigation of impacts of marine related natural hazards such as tsunamis and storm surges (including models and inundation maps) Further development of the African register of marine species					
Global Expected Results 3: Institutional capacities for sustainable ocean management built						
REGIONAL EXPECTED RESULTS	INDICATIVE ACTION	PERFORMANCE INDICATOR	BENCHMARKS	SUB-COMMISSION TARGETS		
				2015	2017	2021
Regional Expected Result 5. Marine and oceanographic training and research institutions strengthened	Assessment of institutional capacities to establish baseline Establishment of new UNESCO Chairs and strengthening existing Chairs Establishment of “centres of excellence”, including African nodes for the Ocean Teacher Academy (OTA) Global Classroom. Strengthening existing marine research institutions through equipment provision and twining with other institutions.	Comprehensive assessment report No of UNESCO Chairs established/strengthened No of centres of excellence or OTA nodes established in Africa No of scientists using expertise acquired through OTA in their work No of countries using IOC’s area-based management guidelines, and actively involved in regional/global projects/programmes.	Information provided through the capacity assessment	Comprehensive assessment report One extra UNESCO Chair established, and the existing Chairs strengthened First Ocean Teacher node established	Two additional Chairs from baseline. Second Ocean Teacher nodes established	Four additional Chairs from baseline Third Ocean Teacher node established.
Regional Expected Result 6: Creation of critical mass of marine science professionals, to identify and address key issues relevant to Africa.	Assessment of human capacity available to establish baseline and critical mass Organize regular specialized training courses, including “summer schools” addressing priority topics. Training of African professionals at M.Sc./Ph.D. Organize an African Marine Science conference in collaboration with other partners.	Comprehensive assessment report No of experts trained	Information provided through the capacity assessment	Comprehensive assessment report Summer school held every year on selected topic 25% of critical mass of marine scientists achieved.	Summer school held every year on selected topic 50% of critical mass of marine scientists achieved.	Summer school held every year on selected topic Critical mass of marine scientists achieved.

ANNEX II

Annex to Resolution XXVI-3

A New Governance Structure in Africa IOC Sub-Commission for Africa and the adjacent Island States (IOC in Africa)

Mission

The IOC Sub-Commission for Africa and Adjacent Island States is an intergovernmental subsidiary body of the Intergovernmental Oceanographic Commission of UNESCO responsible for the promotion of regional and international cooperation, and the development and coordination of the Commission's marine scientific and research programmes, the ocean services, the ocean observing systems, capacity development and related activities in the region by taking account of the specific interests and priorities of Member States from Africa.

Objectives

The Sub-Commission shall:

- (a) Promote regional and international cooperation and coordinate programmes, projects and other activities adopted by governing bodies of the Intergovernmental Oceanographic Commission of UNESCO among the interested Member States and the marine scientific community, as necessary, and make, if appropriate, recommendations to its parent body to this effect;
- (b) Prepare a detailed plan of action for implementation of the adopted programmes, projects and other activities;
- (c) Define regional problems, set priorities and look for solutions, which call for international cooperation, and coordinate marine-related activities;
- (d) Stimulate cooperation with relevant organizations, agencies, and institutions with a view to ensuring complementarity; and
- (e) Cooperate with other Subsidiary Bodies of the IOC on relevant matters of common interest.

Background and justification

The Intergovernmental Oceanographic Commission of UNESCO has two Regional Committees in Africa:

- The IOC's Regional Committee for the Western Indian Ocean (IOCWIO), established in 1979 by the Assembly at its Eleventh Session through Resolution XI-9 as the IOC's Regional Committee for the Cooperative Investigations in the North and Central Western Indian Ocean (IOCINCWIO). The name was changed, at the request of IOCINWIO-V, to IOCWIO by Resolution XXII-10 of the Assembly at its Twenty-second Session.
- The IOC's Regional Committee for the Central and Eastern Atlantic (IOCEA), established in 1984 by the Executive Council at its Seventeenth Session through Resolution EC-XVII.7.

The Regional Committees coordinate and facilitate the development and implementation of IOC activities in their respective regions. The focus of the two Committees is on enhancing national capabilities in marine science and ocean services through cooperation among the Member States from the region and with those from other regions.

The lack of regional Secretariats has been recognized as a hindrance to the development of IOCEA and IOCWIO. Project Offices were established for IOCWIO (at KMFRI, Mombasa, Kenya

from 2000 to 2004; and the UNESCO Regional Office, Nairobi, Kenya, from 2004 to 2009), and for IOCEA (at NIOMR, Lagos, Nigeria, from 2002 to 2004).

The establishment of an IOC Sub-Commission for Africa and the Adjacent Island States, is fully in line with the African Union's regional integration principle. It will strengthen IOC's presence in Africa, increase the effectiveness of its actions, and give concrete effect to the priority accorded to Africa.

The existing IOCEA and IOCWIO Regional Committees will be dissolved during the First Session of the IOC Sub-Commission for Africa and the Adjacent Island States, without prejudice to existing international cooperation in the regions. Specific characteristics of the the regions will be addressed through targeted programmes developed by thematic working groups to be created by the Sub-Commission.

Structure

The key components of the structure of the Sub-Commission include:

- (i) Member States
- (ii) Bureau of Officers
- (iii) Regional Secretariat
- (iv) Thematic working groups or task teams, which will address specific oceanographic issues of sub-regional, regional or international concern.

Membership and Composition

Membership of the Sub-Commission is according to established IOC Guidelines for the Structure and Responsibilities of the Subsidiary Bodies of the Commission.

Member States will be required to nominate national focal points (administration/institution).

Officers of the Sub-Commission

The Bureau of the Sub-Commission comprises the Chair and three Vice-Chairs elected by the Sub-Commission, and shall serve in accordance with the Guidelines for the Structure and Responsibilities of the Subsidiary Bodies of the Commission.

Secretariat for the Sub-Commission

An IOC Regional Office shall be established to serve as the Secretariat for the IOC Sub-Commission for Africa and the Adjacent Island States, and assist with the implementation of all the programmes and activities of IOC in the regional context. It shall:

- (i) Promote the development and use, at the regional level, of ocean observations and services and related supporting activities, coordinated or maintained by IOC;
- (ii) Facilitate the exchange of scientific data and information and the transfer of knowledge resulting from marine scientific research;
- (iii) Assist with the identification of capacity-development needs in the region, especially those related to the programmes of the Sub-Commission, when appropriate, and promote the required capacity-development activities;
- (iv) Organize major scientific/technical conferences, including meetings of the Sub-Commission;
- (v) Liaise and maintain links with all IOC programmes and projects;
- (vi) Establish and maintain links with other relevant organizations, institutions, partners and programmes in order to promote regional and international cooperation.

Programme and budget

The IOC Sub-Commission for Africa and the Adjacent Island States shall be funded from the IOC Regular Budget and extrabudgetary contributions. The IOC Sub-Commission for Africa and the Adjacent Island States, should actively explore the opportunities for raising additional resources for implementation of its programmes.