Intergovernmental Oceanographic Commission
Reports of Governing and Major Subsidiary Bodies

IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean

Fifth Session
Nairobi, Kenya, 23–26 September 2002

UNESCO

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UNESCO 2003

IOCINCWIO-V/3
Paris, 6 June 2003
Original: English*

(SC-2003/WS/24 Rev.)

* An executive summary of this report is also available in English, French, Russian and Spanish.

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ANNEXES

1. OPENING

1 The Fifth Session of the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean (IOCINCWIO-V) was called to order at 10h00 on Monday 23 September 2002, at the United Nations Office, Nairobi, Kenya. Mr P. Vitta, Director of the UNESCO Nairobi Office welcomed the participants on behalf of UNESCO, and informed them of the activities of the UNESCO Office.

2 Mr B. Wanyama, Representative of the Kenya National Commission for UNESCO welcomed the participants and provided an overview of the activities of the National Commission, specifically in the field of natural sciences.

3 Mr Julian Barbière, Programme Specialist for Integrated Coastal Area Management and Regional Programmes, informed the delegates that unfortunately due to unforeseen health reasons, Dr Patricio Bernal, IOC Executive Secretary, was not be able to attend the Session. He recalled some of the major IOC developments that took place since the last Session of this Regional Committee. He invited delegates to take into account some of the results achieved by the World Summit on Sustainable Development into the deliberations of the Committee. Finally, he thanked the Government of Kenya for hosting this Session as well as the UNESCO Nairobi Office for making meeting facilities available. He informed the participants that the organization of this Session was assisted by a contribution of the French Government.

4 Mr Mutia, Representative of Kenya's Ministry of Environment delivered a speech on behalf of his Minister, Hon. Mr Ruto. In his allocution, Mr Mutia identified some of the priority areas that have been identified by Kenya and more widely at the regional level in order to ensure sustainable development of marine and coastal resources. These include the development of a regional data and information centres network and an observing system for ocean and coasts, providing long-term data to the scientific institutions of the region. The development of regional capacity-building needs to be addressed by the Regional Committee, specifically in the areas of ocean sciences and services, together with the provision of equipment in order to carry out research and observation programmes. Finally, he congratulated the IOC Executive Secretary and Secretariat for the high rate of activity implementation since IOCINCWIO-IV in 1997, recalling the strong contribution of Kenya institutions in this process. Mr Mutia speech can be found in Annex III.

2. ADMINISTRATIVE ARRANGEMENTS

2.1 DESIGNATION OF CHAIRMAN FOR SESSION

5 Mr Mika Odido, the Head of IOCINCWIO Project Office, informed the Session that both the Chairman of IOCINCWIO elected at the Fourth Session held in Mombasa, Kenya in 1997, Dr Ezekiel Okemwa (Kenya) and the Vice Chairman Dr Jean Maharavo (Madagascar) left their respective institutions during the intersessional period and were therefore unable to continue their IOCINCWIO responsibilities. The IOC secretariat, with the agreement of the IOC Member States from the region had made temporary arrangements for implementation of IOCINCWIO activities in the absence of both Chairman and Vice Chairman of the Regional Committee (IOC Circular Letter No. 1659 of Dec. 2000). However, in order to implement this Fifth Session of IOCINCWIO, the Regional Committee was requested to designate a Sessional Chair. The Regional Committee designated Dr Johnson Kazungu, from Kenya, as Chair for this session.

2.2 ADOPTION OF AGENDA AND DESIGNATION OF RAPPORTEUR

6 The Agenda was adopted by the Regional Committee and is presented in Annex I of this report.

7 **The Regional Committee elected** Mr Rondolph Payet, Seychelles, as Rapporteur for the Session under Rule of Procedure No. 25(4).

2.3 CONDUCT OF THE SESSION, TIMETABLE AND DOCUMENTATION

8 The Head of the IOCINCWIO Project Office, Mr Mika Odido, acting as Technical Secretary for the Session, proposed a *modus operandi* for the Session, and a timetable. In total, five intra-sessional working groups were established in order to advance the proceeding of the Session. In this respect, three working groups were established with the task of identifying regional priorities in Ocean Science (chaired by Kenya), Ocean Services (chaired by Tanzania), and Ocean Observation (chaired by Mozambique). Two more intra-sessional groups were set up with the task of drafting the IOCINCWIO Programme and Budget for the inter-sessional period, and the IOCINCWIO-V Recommendations.

9 The list of documents for the session is presented in Annex IV of this Report.

3. REPORT ON INTERSESSIONAL ACTIVITIES

10 The IOCINCWIO Technical Secretary, Mr Mika Odido, presented his report on intersessional activities spanning from the IOCINCWIO-IV session in 1997 to September 2002.

11 He highlighted the high level of implementation of the IOCINCWIO-IV work plan compared to the previous inter-sessional periods. This was mainly due to the extra-budgetary support provided by the Government of Sweden which amounted approximately US$2.5million over the ten-year period 1989–1999, and approximately US$300,000 which was provided by the Government of Flanders in Belgium for the ODINEA project (1998–2000). In addition, the Government of Flanders had also provided about US$2.3 million to support the development of the Ocean Data and Information Network for Africa, involving 20 African countries from both IOCEA and IOCINCWIO regions in the period 2001–2004 (see also 4.3.1). An external evaluation of the project undertaken in 2002 was very positive and recommended the continuation of the project beyond 2004. The IOCINCWIO Project Office was officially inaugurated on 8th February 2000 at the Kenya Marine & Fisheries Research Institute (KMFRI) Headquarters in Mombasa, Kenya. The office was established following the endorsement of Resolution XX-15 at the 20th Session of the IOC Assembly in 1999, and was to be hosted for an initial period of two years by KMFRI. The Assembly took into consideration substantive growth both in terms of scientific manpower and research activities, and the strong need for an effective and Africa-based co-ordination mechanism to assist the Regional Committee in planning and implementing regional research, monitoring and management programmes. The establishment of the Regional Project Office provided continuity, and had enabled the implementation of IOCINCWIO activities when both the Chairman and Vice Chairman of the Regional Committee ceased to hold their positions during the intersessional period.

12 Mr Odido also provided information on the implementation of specific programme activities. This information is presented in the Report on Intersessional Activities as found in Annex VI.

13 **The Regional Committee congratulated** the Secretariat for the high level of activities undertaken during the intersessional period. In particular the Committee **expressed** gratitude towards the governments of Sweden and Flanders (Belgium) for the support provided over the years.

14 **The Regional Committee expressed** its gratitude to the Government of France for providing support in the organization of the IOCINCWIO-V Session.

15 The Delegate of Kenya, Dr Johnson Kazungu, reported on the activities undertaken by his country during the intersessional period. He highlighted some of the activities that were not implemented during this period, mainly because of lack of resources, and these included the establishment of a regional Ocean Dynamics and Climate Group of Experts, Recruitment and Stock assessment studies, the mapping of critical habitats in WIO islands, and the implementation of marine pollution monitoring activities such as mussel watch and organic pollutants monitoring. He proposed that these activities should be included in the next IOCINCWIO work plan.

16 The Delegate of Mozambique, Mr Ilidio Goenha, highlighted the participation of his country in several IOC programmes such as ODINAFRICA, GOOS-AFRICA, and the African Process. He expressed some concerns with regard to the maintenance of tide gauges in Mozambique and called upon IOC for assistance.

17 The Delegate of Mauritius, Dr Soondron Vishnu, informed the Regional Committee on the activities carried out in his country which included participation in the Harmful Algal Blooms programmes, the development of a pilot project on mapping of coastal areas (supported by COI), the establishment of a NODC, contribution to the development of the WIOMAP and IOGOOS initiatives, the initiation of a coral reef monitoring system, and continental shelf delimitation activities in the context of UNCLOS.

18 The Delegate of Tanzania, Dr Alfonse Dubi, informed the Regional Committee that a DNA located at the Institute of Marine Sciences was established during the intersessional period and stressed the need for reinforcement of capacity-building activities, in particular through further provision of equipment and maintenance support. He emphasised the importance of coastal mapping activities in view of the strong anthropogenic pressure on coastal ecosystems.

19 The Representative of WIOMSA, Dr Julius Francis, expressed concern with the way the report of the intersessional activities was produced. He felt that the report should be more result-oriented rather than process-oriented, providing information on concrete outcomes.

20 The IOC Secretariat stressed that it was difficult for the report to be fully exhaustive as it is covering a period of 5 years of activities. **The Regional Committee proposed** that an improved reporting mechanism should be initiated, with standardised and regular inputs from the IOCINCWIO Project Office and Member States, possibly through the ODINAFRICA project.

4. PROGRAMME MATTERS

4.1 OCEAN SCIENCES

4.1.1 Oceans and Climate

21 The Technical Secretary of the Session introduced the items for discussions based on the Annotated Agenda (available as document IOCINCWIO-V/2). He summarised the activities

related to the three main actions identified during the IOCINCWIO-IV namely: (i) improvement of long-term monitoring of all oceanographic parameters, (ii) inclusion of scientists from the region in the planning as well as the implementation and analysis stages of the visiting expeditions, and (iii) establishment of a Group of Experts on Ocean Dynamics and Climate. **The Regional Committee noted** that some of the activities have been implemented while others need to be considered for further action.

22 **The Regional Committee recognised** that there is a strong need for common software tools for analysis of JGOFS and WOCE data. It was noted that there is little participation of experts from the region in the WOCE phase II. The Session recommended that the Committee take active part in the CLIVAR and GODAE programmes. Related data management skills need to be reinforced within the institutions of the region. **The Regional Committee encouraged** collaboration between GOOS-AFRICA and ODINAFRICA towards this end.

23 It had been noted that the lack of resources is the main reason for the limited rate of implementation of some of the planned activities**. The Regional Committee noted** with regret that the Group of Experts on Ocean Dynamics and Climate had not been established and **recommended** its initiation for the forthcoming intersessional period.

24 Noting that there had not been any advance in modelling and climate predictions through IOCINCWIO, **the Regional Committee stressed** the need for developing capabilities and skills in region for modelling. However, the Session **noted** with satisfaction that the Eduardo Mondlane University in Maputo, through joint programmes with the Norwegian modelling Group, is developing skills for near shore modelling. The Session was informed that the Drought Monitoring Centre in Harare and Nairobi provide training in climate modelling. Collaborative efforts should be undertaken so as to reinforce the training activities in the region. **The Regional Committee recommended** that a regional training course on modelling be organised in collaboration with these organizations.

4.1.2 Science for Ocean Ecosystems and Marine Environmental Protection (SOEMEP)

25 Mr Julian Barbière introduced this item by outlining that the main focus of the SOEMEP programme is to co-ordinate research and communicate results related to the understanding of: (i) the dynamics of ocean ecosystems in relation to their structure, functioning, composition, and stability as well as the effects of biological, chemical and physical factors; and (ii) the status and trends concerning living marine resources, as well as the factors affecting water quality, including eutrophication, waste dumping and the source and fate of contaminants and their eco-toxicology.

26 At the regional level, SOEMEP work plan activities were implemented through the establishment of: (i) a survey of potentially harmful marine micro algae involving five national institutions and the publication of a manual (IOC Manuals and Guides No. 41); (ii) the set-up of the MASDEA biodiversity database (http://www.vliz.be/Vmdcdata/masdea/index.htm); (iii) critical habitats mapping through a training course organised together with UNEP in 1997; (iv) the assessment, monitoring and management of physical shoreline changes in the Western Indian Ocean region through the convening of a regional workshop, held in Maputo in 1998, the publication of ‘Guidelines for study of shorelines changes in the Western Indian Ocean region’ (IOC Manuals and Guides No. 40), and development of three pilot studies; (v) the publication of a methodological guide on sensitivity mapping for the Western Indian Ocean (IOC Manuals and Guides No. 38); and (vi) the undertaking of nutrient and water quality monitoring.

27 More information on these activities can be found in the Report on Intersessional Activities in Annex VI.

28 The Regional Committee was informed that there are growing efforts to develop the LMEs projects in the IOCINCWIO region. Dr Julius Francis provided information on the recent World Bank meeting in Maputo to address both the fisheries and the LMEs issues for the Aghulas and Somali currents. **The Regional Committee recommended** that a scientific assessment be made to confirm whether the Mascarene ecosystem can be classified as the Large Marine Ecosystem.

29 With regards to the Harmful Algal Bloom (HAB) programme, the damage to the fisheries due to invasive species is significative in some countries such as Kenya and Tanzania. Identification of species will help to address such issues. **The Regional Committee stressed** the need for addressing issues related to near shore ecosystems, coastal pollution and Mussel Watch. The application of remote sensing and GIS to address ecosystems issues should be encouraged.

30 Noting with satisfaction that the IOC in collaboration with the UNEP organised a training course on remote sensing for seagrass for the IOCINCWIO region, **the Regional Committee expressed** regret that this course did not include the Island States and suggested that consideration be given to this gap.

4.1.3 Marine Sciences for Integrated Coastal Area Management

31 Mr Julian Barbière introduced this item by referring to the decision of the IOC Executive Council at its 31st Session (November 1998) to establish an independent programme on Marine Science for Integrated Coastal Area Management (ICAM). The objective of this programme is to assist IOC Member States in their efforts to build marine scientific and technological capabilities in the field of ICAM. At the regional level, the Pan African Conference on Sustainable Coastal Management (PACSICOM) held in Maputo, Mozambique in 1998 provided a forum for reviewing coastal management issues in Africa and charting the way forward. Detailed reports on the follow-up to the conference are provided under the section on the African Process (item 6). Several activities have already taken place during the intersessional period. They include a Workshop on data management for ICAM which was held in Cape Town, South Africa in December 1999. IOC has also provided support for several capacity-building initiatives for ICAM, including (i) a training course on Integrated Coastal Management for Practitioners in Western Indian Ocean by WIOMSA and University of Rhode Island – Coastal Resources Centre (URI-CRC) - (March 1999); (ii) Learning and Performing: Developing Skills for Coastal Management Practitioners in the Western Indian Ocean region organised by WIOMSA in collaboration with WIOMSA and URI-CRC (March- September 2001); (iii) support to regional scientists to attend the Coastal Zone 01 Conference, last year in Cleveland, USA, and organization of a special session on African coastal megacities and their associated problems. Regional guidelines have been published on management of coastal erosion and the vulnerability mapping of coastal areas (IOC Manuals and Guides No. 38 and 40). Finally, IOC has provided support to the implementation of the LOICZ Basins project-Afribasins.

32 Several Member States expressed the need to develop capacity in the region on science/policy interface either in the context of ICAM, or more broadly with regard to formulation of marine policies. **The Regional Committee recommended** the organization of a workshop on science/policy interface for ICAM.

33 The Regional Committee expressed its appreciation to the IOC for the support provided in the development of ICAM activities in the region.

34 **The Regional Committee recognised** the active role of regional marine associations namely WIOMSA, SEACAM, IUCN, WWF and the IOI and their increased co-operation with the IOC for the capacity building activities in the region. With the reinforcement of the WIOMSA, fellowships and marine research grants are now allocated to scientists from the region for their participation in meetings and workshops. **The Committee noted** that the GOOS-AFRICA project is important for building observing systems for long-term management of coastal and marine environments for the region. **The Committee also recognized** the need to develop the application of remote sensing and GIS for the coastal zone studies in the region.

4.2 OPERATIONAL OBSERVING SYSTEMS

4.2.1 GOOS and Related Activities

35 Four GOOS-related initiatives were presented to the Regional Committee. These are the Western Indian Ocean Marine Applications Project (WIOMAP), the Regional Ocean Observing and Forecasting System for Africa (ROOFS-AFRICA), the Indian Ocean GOOS (IOGOOS), and the ocean observation component of the Regional Action Plan for the Global Climate Observing System (GCOS).

36 The delegate of Mauritius, Mr Soondron, presented WIOMAP. The Eleventh Session of the former WMO Commission for Marine Meteorology recommended that studies be undertaken to formulate WIOMAP along lines similar to the South-East Asian sub-regional project – South-East Asian Centre for Atmospheric and Marine Prediction (SEACAMP) which had been successfully implemented for the benefit of countries in South-East Asia. The project proposal is divided into four separate but inter-linked modules, partly to facilitate interest and funding from more than one donor / funding agency. These modules are: (i) Human capacity building through formal training; (ii) Expansion of the marine meteorological and oceanographic observing network; (iii) Enhancement of communications infrastructure; and (iv) Establishment of a specialized marine meteorological centre for ocean products.

37 The GOOS-AFRICA Co-ordinator, Mr Ahanhanzo, presented the Regional Ocean Observing and Forecasting System for Africa (ROOFS-AFRICA). Priority will be given to (i) improved collection of *in situ* Ocean Measurements and Observations Validation and their use in tidal prediction, erosion risk assessment, forecasts of coastal flooding and estimates of sea-level rise; (ii) the collection and spatial analysis of satellite imagery of the coastal seas for fisheries resource management and coastal planning; (iii) development of regional modelling and forecasting capabilities; and (iv) end-to-end operational system to deliver information products to the intended users in a timely and reliable fashion.

38 Mr Ahanhanzo also summarized the activities being developed by IOGOOS. A workshop was held in November 2000, in Perth, Australia in an effort to find out what the Indian Ocean community required in an observing system, and to identify an ocean observing system design for the Indian Ocean. Activities implemented include: (i) drafting a governing Memorandum of Understanding; (ii) finalization of the strategy paper; and (iii) inventories of data and marine science capabilities in the region; and others. IOGOOS will be formalized at the First Conference of IOGOOS planned for 4–9 November 2002 in Mauritius. Topics for consideration during the conference include: continue the planning for ocean and coastal observing systems, satellite applications, data management and capacity building.

39 The representative of the Drought Monitoring Centre (DMC), Mr P. Ambenje, outlined proposals for an Ocean component of the Regional Action Plan for the Global Climate Observing System (GCOS). The plan was developed during a Regional Workshop for Eastern

and Southern Africa on Improving Observing Systems for Climate Change, meeting held in Kisumu, Kenya, in October 2001. The Regional Action Plan addresses the deficiencies in the observing systems in the Western Indian Ocean. The Plan recommends: the establishment of a network of observing stations providing routine, systematic and sustainable coastal and oceanographic data for monitoring long-term changes of the marine environment including local and regional sea level rise. The network should be complemented with enhancement of capacity building and establishment of 1 or 2 centres of excellence using *in situ* and satellite data.

40 **The Regional Committee noted** the considerable effort that has been made by the IOC secretariat and other organizations in developing these proposals. **The Committee welcomed** the development of the proposals and pointed out the importance of integrating them to benefit from synergies. **The Committee further identified** their components that are relevant to the region for implementation as part of the work plan for the intersessional period.

41 **The Regional Committee noted** that several on-going and planned initiatives in the region such as the UNESCO Chair in Marine Science and Oceanography at the Mondlane University in Mozambique, the IMO programme on safety of navigation and Search and Rescue network, and **emphasised** that collaboration between national institutions and regional organizations is crucial for successful implementation of GOOS in the region.

4.2.2 GLOSS

42 Mr Ahanhanzo introduced the item on Global Sea Level Observing System. National experts from Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa, and Tanzania had prepared comprehensive reports on the tide gauges which have operated in the region, the volumes and quality of data collected; bibliography of sea-level literature from the region; inventory of capacity available for the installation, levelling, and maintenance of gauges as well as analysis of data; identification of requirements for the completion of the national, regional and GLOSS network components in each of the countries of the region; collection and analysis of sea-level data from the region, with a view to identifying variability of sea-level and long-term trends at different places in the region; and production of a bibliography of sea-level literature from the region. On the basis of these reports and other available information, the GLOSS Regional Co-ordinators for IOCEA and IOCINCWIO prepared a “Position Paper on the Status of GLOSS in Africa” for the GOOS-AFRICA meeting held in Nairobi in November 2002. This was available as IOC/INF-1165. A training course for technicians involved in the maintenance of tide gauges was held at University of Cape Town in November 1999 (IOC Training Course Report no 51). Another training course on Satellite Altimetry and Physical Oceanography planned in collaboration with the Western Indian Ocean Marine Science Association (WIOMSA) has been postponed to 2003. The objectives of this course will be to provide a better understanding of the satellite altimetry concepts and applications to oceanography.

43 Noting that sea level is a critical issue since it impacts on navigation, coastal management, and modelling, **the Regional Committee emphasised** the importance of implementing an integrated programme addressing sea-level measurements, processing of data, and analysis and interpretation of the data. Elements of this programme should include training for technicians, upgrading of tide gauge stations. **The Regional Committee recommended** the upgrading of the network of sea-level stations in the region and the organization of a training workshop on installation and maintenance of gauges as well as analysis and interpretation of sea-level data.

44 Linkages should be made with relevant modules of WIOMAP, GOOS-AFRICA and IOGOOS.

45 **The Regional Committee endorsed** the proposal for organising a training course on satellite altimetry and oceanography, and **requested** that IOC explore the possibility of holding the course as a priority in 2003. WIOMSA indicated its continued interest in collaborating in implementing the programme.

4.3 OCEAN SERVICES

4.3.1 Marine Data and Information Management

46 Mr Mika Odido reported on the activities of IOC's Committee on International Oceanographic Data and Information Exchange (IODE), and especially on the implementation of the first and second phases of the Ocean Data and Information Network for Africa (ODINAFRICA).

Ocean Data and Information Network for Africa—Phase I

47 The final workshop of the first phase of the Ocean Data and Information Network for Africa, was held in Lisbon, Portugal from 25–27 October 2000, back to back with the Sixteenth Session of the IODE (IOC Workshop Report No 172). The workshop participants concluded that ODINAFRICA-I had been able to achieve its objectives in the three years 1998–2000. Starting with just two National Oceanographic Data Centres (NODCs) in Kenya and South Africa at the start of the project, NODCs/DNAs had been established in Madagascar, Mauritius, Seychelles, Tanzania, as well as a subsidiary national oceanographic data centre in South Africa. The capacity of the data centres to collect, process, analyse, store and interpret various categories of data sets was strengthened through the provision of equipment, software as well as training for data centre personnel. The national meta databases enabled users to know what data sets are available and how to access them. The development of national data archives has contributed to the preservation of data sets which were in danger of being lost. The centres have been able to access data sets from regional and international data centres. Internet access provided through the project has improved communication within and outside the region, as well as access to international data and information sources.

48 In order to further strengthen the centres to be able to effectively discharge their responsibilities, and on the basis of the experiences in the first phase of the ODINEA/ODINAFRICA, the participants made recommendations for upgrading of equipment and software; allocation of more staff to the data centres by the host institutions; training and internship to increase the number of people with skills in data management as well as the competence of those already trained—especially in the development of data and information products; promotion of products and services offered by the data centres; and linkages to other ongoing initiatives. These recommendations have been incorporated in the second phase of the project, which was developed by the institutions that participated in the first phase in collaboration with the IOC Secretariat.

Ocean Data and Information Network for Africa—Phase II

49 The commencement of implementation of the second phase of ODINAFRICA was postponed due to delays in transfer of the funds to IOC. Though it had been envisaged that the project would commence in May 2000, it was not until August that the funds were transferred to UNESCO. Due to the already tight schedule planned for the second half of the year, including

the Sixteenth Session of IODE and the final workshop for the Ocean Data and Information Network for Africa, Phase I, it had not been possible to start the implementation of planned activities in 2000. The co-ordinators, in consultation with the participating institutions decided to defer the commencement of the project to January 2001.

50 In the first year of implementation of the project (2001), a considerable amount of resources was spent on procurement of equipment and software as well as setting up of data and information centres. However training and development of services and products are allocated the bulk of the funds available (42%). The second ODINAFRICA Planning and Review workshop (IOC Workshop Report No. 179) was held in Nairobi, Kenya from 14–17 November 2001. The workshop reviewed the progress in implementation of work plans for 2001 and approved work plans and budgets for 2002. The workshop was followed by a joint session with GOOS-AFRICA during which the ODINAFRICA and GOOS-AFRICA participants explored opportunities for collaboration.

51 Though good progress was made in implementing the work programme for 2001, the pace for 2002 has been much slower due to administrative delays caused by the change in the UNESCO financial management system.

52 As a follow up of IOCINCWIO-IV, consultations have taken place with WIOMSA and IOI for the production of a regional journal of marine science in electronic format as well as hard copy. This initiative will be pursued further within the framework of ODINAFRICA during the coming intersessional period.

53 Finally, Mr Odido reported on the results of the Evaluation of the ODINAFRICA project carried out at the request of the Government of Flanders. The report was positive and recommended the continuation of support for ODINAFRICA beyond 2004. The report also highlighted several areas that need to be addressed, especially the improvement of Internet connectivity in the participating institutions; use of data managers from better established ODINAFRICA centres to assist in training others; increased focus on data and information products; and enhancement of public awareness and education activities.

Information and Data Exchange at COP-3

54 The Third Conference of Contracting Parties to the Nairobi Convention (UNEP Regional Seas Programme) meeting in Maputo, Mozambique in December 2001 identified the ability to acquire, analyse, interpret, archive and disseminate data, as well as the capacity to generate information in support of decision making and management of the coastal and marine environment, as being of vital importance to governments and other stakeholders. UNEP as the secretariat for the Nairobi Convention was requested to actively seek collaboration with IOC-UNESCO in implementing the activities that were identified under this component of the work plan.

55 **The Regional Committee expressed** its high satisfaction with the implementation of the ODINAFRICA project.

56 The Delegate of Kenya, Dr J Kazungu, highlighted some of the problems that the region is still facing. These include difficult Internet access because of bandwidth problems, the provision of additional equipment and software to national centres, and the need for continuous and strengthened capacity building within ODINAFRICA.

57 **The Regional Committee suggested** that one of the foci of a potential third phase of ODINAFRICA could be the development of specific products for coastal users, in particular coastal area management practitioners such as coastal zoning plans and sensitivity mapping. **The Regional Committee recommended** the preparation of a proposal for a third phase of ODINAFRICA.

58 **The Regional Committee welcomed** the decision by COP-3 to seek active collaboration with IOC-UNESCO in the implementation of activities in its 2002–2003 work programme and supported the full co-operation of IOCINWIO and its related activities with the Nairobi Convention.

4.3.2 Ocean Mapping

59 Mr Odido reported on the activities of the Editorial Committee of IBCWIO. The preparatory work for publication of the IBCWIO has been completed, and plotting sheets together with a diskette were being distributed to sheet co-ordinators for finalisation. The first two sheets were printed in 1998 by Germany. Three more sheets are in the process of being finalised. The next IBCWIO meeting is scheduled to take place in 2003.

60 **While thanking** the German Government for the continuous support provided, **the Regional Committee stressed** the importance of an early presentation of the whole chart, and invited Member States to closely co-operate in the finalisation of the Chart.

61 The Delegate of Mozambique stressed that his country is concentrating most of its resources on near-shore mapping, and that as a result participation in the IBCWIO has been limited.

62 **The Regional Committee recommended** that co-operation be established between IOCINCWIO and the Southern African Island States Hydrographic Commission (SAISHC).

63 **The Regional Committee decided** that the mapping of shallow waters to assist in fisheries and coastal management is also a priority area for Member States of the region.

4.4 UNESCO PROJECTS ON CROSS-CUTTING THEMES

64 Mr Ahanhanzo introduced this agenda item by referring to the Executive Board of UNESCO's decision (at its 160th session) to designate two cross-cutting themes, namely (i) eradication of poverty, especially extreme poverty, and (ii) the contribution of the new information and communication technologies to the development of education, science, culture and the construction of a knowledge society, as priority area for the current biennium (2002–2003), which must be addressed by all Sectors of the organization. As results, interdisciplinary and intersectoral projects connected with the two cross-cutting themes mentioned above have been developed. IOC is leading/participating in three inter-sectorial projects, two of which are implemented in Africa:

- UNESCO Knowledge Portal (US$2,000,000) (UNESCO/IOC Regional Ocean Portals) for Africa, Caribbean and South East Asia; and

- The application of remote sensing for integrated management of ecosystems and water resources in Africa (US$400,000).

4.4.1 African Ocean Portal

65 Dr D. Masalu, Chief Editor of the African Ocean Portal, presented this initiative which is part of the UNESCO Knowledge Portal, launched to provide access to information and data on all aspects of ocean/coastal research and management for the benefit of various communities such as decision makers, the private sector, the research and education community and the general public. The African Ocean Portal's main objective is to provide a communication forum for all layers of society with an intellectual, economic or political interest in the oceans and coastal areas. The African Ocean Portal takes into consideration the need to provide a targeted, personalized communication and information provision service for a wide variety of target audiences/stakeholders using both pull (enabling users to locate information for themselves) and push (suggesting information to users based on their preferences) technology.

66 The first meeting for the Editorial Board for the African Ocean Portal was held at the headquarters of the Intergovernmental Oceanographic Commission of UNESCO in Paris, France from 13–17 May 2002. The session brought together experts from several Member States and organizations in Africa. Dr Desiderius Masalu of the Institute of Marine Sciences, Zanzibar, Tanzania was elected Chief Editor, with Ms Regina Folorunsho of the Nigerian Institute for Oceanography and Marine Research, Lagos Nigeria, as the Assistant Chief Editor. Some progress has since been made in developing the portal. A follow-up training/editorial committee meeting is planned for Mombasa in December 2002.

67 **The Regional Committee strongly endorsed** this initiative and encouraged Member States to participate actively in the building of the portal by submitting information on national ocean and coastal activities on a regular and sustained manner.

68 Several Member States expressed the need to build a mechanism by which the African Ocean Portal will proactively seek for new information on Internet in order to be integrated in the portal's content.

69 In this regard **the Regional Committee recommended** that a technical editor be engaged with the task to search on a regular basis relevant information for inclusion in the portal.

4.4.2 The application of remote sensing for integrated management of ecosystems and water resources in Africa

70 Mr Justin Ahanhanzo, IOC Secretariat, presented this project. The aims of the project are to: (i) encourage the participating countries to strengthen their infrastructures and capacity, so as to facilitate easy access to remotely-sensed information and communication systems through formal and non formal modes of education; (ii) use remotely-sensed data to assess the present state and variability in selected vulnerable ecosystems and water resources; (iii) develop forecasts of the changes in these systems as far ahead as possible to meet the needs of local decision makers and the requirements of the regional and international conventions related to pollution, biodiversity, desertification, preservation and the sustainable use of living resources; (iv) strengthen the UNESCO Chairs Network (especially those related to sciences and technology, water resources, environment and ecosystems, sustainable development) and the existing regional training centres of excellence in the fields related to this project; (v) enable local students, researchers and managers to convert remote sensing research results into useful management information and decision-making tool to meet local and societal needs; (vi) provide satellite imagery for most of the vulnerable ecosystems including water resources and World Heritage sites in the participating countries; (vii) establish a Virtual Laboratory for satellite data management & communication; and (viii) use the information gained in the project to facilitate

social rehabilitation of disadvantaged and marginalized populations around vulnerable ecosystems.

71 **The Regional Committee supported** this new initiative and welcomed the participation of UNESCO Chair of Marine Science and Oceanography in Maputo into the project, and **recommended** that additional resources be allocated to the Chair in order to have the capabilities to provide training on remote sensing applications for the marine environment.

5. CAPACITY BUILDING (TEMA) IN MARINE SCIENCES, OBSERVATIONS, SERVICES AND OBSERVATIONS.

72 Dr Antonio Hoguane, the Co-ordinator of the UNESCO Chair in Marine Sciences and Oceanography, introduced this item with special emphasis on the experience of the Chair. He stressed that because the traditional structure of the university does not include oceanography and marine sciences, it was only through the establishment of the Chair as a follow-up to PACSICOM, that formal education in marine sciences began in the Eduardo Mondlane University in 1999. The development of the activities of the Chair was very rapid and at present, a formal teaching curriculum at the M.Sc. level in oceanography has been introduced. The Chair is actively involved in the regional activities and is looking forward to develop exchange of staff in the region following the successful experience with overseas institutions. There is already a Memorandum of Understanding between the Eduardo Mondlane University and the University of Dar-es-Salaam, including a plan for visiting professors.

73 **The Regional Committee recommended** that funds be allocated to exchange of staff and students between research institutions and universities within the framework of the UNESCO Chair.

74 **The Regional Committee congratulated** the Co-ordinator for the successful and impressive development of the Chair within such a short timeframe.

75 **The Regional Committee requested** IOC to support medium- and long-term training programmes at M.Sc. and Ph.D. level in the region. **The Committee urged** the universities in the region to develop regional training courses in partnership with regional institutions and bodies such as FAO, UNEP, WIOMSA, IOI since capacity building is a cross-cutting issue including natural, social, economic sciences and marine policy.

76 **The Regional Committee welcomed** and **supported** the initiative of IOC to organise a training course on Article 76 of UNCLOS and **requested** the Member States to fully participate in the planning and development of the course.

77 The Secretariat provided information on the new IOC strategy for capacity building. A position at the level of Senior Assistant Secretary dedicated to the capacity building is under recruitment process. IOC is also participating in POGO, which is an initiative in support of building capacity in the area of operational oceanography. Co-operation between the IOC and other institutions including the WMO will reinforce capacity building in oceanography and marine meteorology.

78 **The Regional Committee expressed** appreciation to WIOMSA for having established the Marine Research Grants (MARG) and Marine Science for Management programme (MASMA) as mechanisms for supporting research in the region. **The Regional Committee identified** further capacity-building needs as follows: (i) consolidation of the courses with a multidisciplinary approach; (ii) development and reinforcement of M.Sc. courses; (iii) promotion

of scientific mobility through exchange programmes of experts between the universities in the region; and (iv) resources mobilisation.

79 **The Regional Committee adopted** Recommendation IOCINCWIO-V.1 on Further development of Capacity building in the IOCINCWIO region.

6. PARTNERSHIP CONFERENCE/THE AFRICAN PROCESS

80 Mr Julian Barbière introduced this item by referring to Document IOC/INF-1069 on the African Process for the Development and Protection of the coastal and Marine Environment in Sub-Saharan Africa. He recalled that the Cape Town Conference on Development and Protection of the Marine and Coastal Environment in sub-Saharan Africa, launched this initiative. This followed a recommendation from the Pan African Conference on Sustainable Coastal Management (PACSICOM) Conference held in Maputo, Mozambique, 1998, that a Partnership Conference, which would bring African States and the donor community together, be held in 2002. The purpose will be to seek increased support for the development of intervention project proposals for the development and protection of the coastal and marine environment in sub-Saharan Africa.

81 A Preparatory Committee for the organization of the Partnership Conference was established. ACOPS was designated as facilitator of the African Process and was assigned the task of developing a GEF medium-size project (MSP) proposal as a tool for preparing a set of proposals addressing the marine and coastal issues. In September 2000, ACOPS signed an agreement with IOC/UNESCO to jointly implement the GEF MSP and provide technical assistance in the organization and running of the national teams and working group. IOC also provided a financial and human assistance to the GEF MSP. In 2002, the African Process was recognised as a direct contribution to the Environment Component of NEPAD, a co-operation framework for Africa's development. The Partnership Conference was held in September 2002, at the level of Heads of States, at the World Summit on Sustainable Development (WSSD), Johannesburg. The Ministerial and Heads of States Conference of the African Process endorsed the portfolio of proposals including the GOOS-AFRICA proposal.

82 The African Process is now integrated into the Environmental component of the NEPAD. Senegal as the Co-ordinator for this component offered to establish a Co-ordinating Secretariat for the whole Environmental component of the NEPAD. A consultative meeting is being convened in Dakar with the participating countries to establish institutional arrangements for the implementation of the projects.

83 In addition, the African Process has been included into chapter VIII (56.i) on *"Sustainable Development for Africa" of the Plan of Implementation for the WSSD, which states the need to "Develop projects, programmes and partnerships with relevant stakeholders and mobilize resources for the effective implementation of the outcome of the African Process for the Protection and Development of the Marine and Coastal Environment"*.

84 **The Regional Committee expressed** its appreciation to IOC for the support provided and requested that IOC continues providing support to the African Process.

85 **The Regional Committee requested** that in each country there should be a well-designated co-ordinating mechanism for the follow up of the African Process. There were some questions on how NEPAD could provide support and funds to the projects arising from the

African Process. There were many questions on the timeframe and how the projects would be funded.

86 While **the Regional Committee acknowledged and appreciated** the unified approach of the African Process leading to the portfolio of project proposals, **the Regional Committee also expressed** concern about a possible fragmentation of the projects into pieces and recommended a unified approach for their implementation. **The Regional Committee expressed** a need for greater collaboration among the United Nations agencies.

87 FAO and IMO expressed their interest in developing co-operation respectively in the areas of fisheries and marine pollution for the follow up of the African Process.

7. WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

88 Mr Julian Barbière provided a report on the involvement of IOC into the WSSD process. He recalled that the IOC Executive Council at its extraordinary session (December 2001) adopted Resolution EC-Ext.1.1 and its annex, the *Declaration by the IOC of UNESCO to WSSD*. In addition, a complementary document entitled 'Sustainable Development and the Intergovernmental Oceanographic Commission of UNESCO' was prepared by the Secretariat and presented at the Council session. The Declaration and its supporting document emphasize the importance of the ocean in the global environment and specifically stresses the unique role of the IOC for ocean sciences and services within the UN system; the measures by which IOC has already implemented Agenda 21 of UNCED; and its strategy for continuing to address the sustainable development agenda in the next ten years. These documents were submitted to the second preparatory committee for WSSD.

89 In order to mobilize the ocean community on the eve of WSSD and to review the progress and failure achieved since Rio in 1992, IOC organized together with a consortium of public and private institutions from governmental, intergovernmental, and nongovernmental sectors, the Global Conference on Oceans and Coasts at Rio+10 (3–7 December 2001, Paris). The results of the Conference were also presented at the PrepCom-II meeting, in January 2002 in the form of the Co-Chair's Statement.

90 The World Summit on Sustainable Development took place in Johannesburg from 26 August–4 September 2002. The IOC Chairman and Executive Secretary attended on behalf of the Commission. One of the main outputs of the Summit is the Plan of Action of WSSD. It provides a plan of action for tackling the priority issues identified by WSSD and addresses the sustainable development agenda in the next ten year. The Ocean and Coasts Section (para. 29-33) of the Plan of Implementation was endorsed by Member States and makes specific reference to the need to strengthen the ability of IOC to build national and local capacity in marine science and the sustainable management of oceans and their resources. Several Type II Partnership Proposals related to oceans and coasts were endorsed by WSSD.

91 In order to co-ordinate ocean activities at WSSD, an informal Ocean Co-ordination Group was established and played an active role during the summit in mobilising the ocean communities. This group will continue its work after WSSD and will act as follow-up mechanisms for the implementation of ocean and coasts-related WSSD decisions, and in particular Type II Proposals. It has been suggested that the Ocean Co-ordination Group should formalise its work and become an Ocean, Coasts and Islands Forum, convening on a regular basis.

92 **The Regional Committee** took note of this report and congratulated the Executive Secretary of IOC for strengthening the visibility of IOC at the global scale.

93 **The Regional Committee recommended** that the resolutions related to oceans, coasts and islands identified in the WSSD plan, as well as relevant Type II Partnerships, should be translated into concrete action at the regional level, through the active representation and participation of the IOCINCWIO Regional Committee in various international fora as a mechanism for improving co-ordination among the agencies.

94 **The Regional Committee recommended** that Member States initiate the development of a uniform mechanism for reporting and assessment of the marine environment at national and regional levels, consistent with the Global Marine Assessment, planned to be established in 2004.

95 **The Regional Committee adopted** Recommendation IOCINCWIO-V.2 on Follow up to WSSD, NEPAD and African Process.

8. COLLABORATION WITH OTHER REGIONAL SUBSIDIARY BODIES, AGENCIES, AND REGIONAL ORGANIZATIONS

96 Mr Barbière introduced this item by stressing that IOC governing bodies have always recognised the importance of collaboration with agencies and organizations in the field of marine sciences. This was further emphasised by the Twentieth Session of the IOC Assembly which instructed the IOC Executive Secretary to strengthen and extend bonds of co-operation with regional and global non-governmental and governmental organizations. To this end IOC has implemented activities in this region jointly with other organizations such as FAO, UNEP, WMO and NGOs WIOMSA, SEACAM, IUCN.

97 The IOCINDIO Chairman, Dr Zaker, highlighted the fact that both IOCINDIO and IOCINCWIO share the same characteristics and could respectively benefit from increased co-operation and co-ordination in the implementation of their programmes. He identified data management and capacity building as two areas where the two Regional Committees could implement joint activities.

98 The Representative of IOI, Mr K. Kairu, informed the regional committee on the activities of the International Ocean Institute at the global and regional level, related to ocean governance. An IOI system-wide project on coastal livelihoods has been established in India, Costa Rica, South Africa, and Kenya. The next *Pacem in Maribus* conference is planned to take place in Cape Town, South Africa in December 2003, and will focus on African regional issues as well as global ones.

99 The Representative of the Drought Monitoring Centre, Mr P. Ambenje, informed the Committee that there were a number of initiatives in which the centre would collaborate. These include efforts to improve observations over the Indian Ocean within the framework of GOOS and GCOS strategies. DMC has been mandated to oversee the implementation of the project proposals geared towards improving systematic climate observations. Other potential areas for collaboration are remote sensing, capacity building, modelling and disaster management.

100 Dr J. Francis, Representative of the Western Indian Ocean Marine Science Association, provided an overview of the activities and programmes of WIOMSA. WIOMSA's objective are to promote and advance marine sciences in the WIO region through specific mechanism such as research grants, to provide a forum for discussion and dissemination of information, and foster

inter-institutional linkages. He identified potential areas of co-operation with IOCINCWIO in the implementation of (i) capacity-building activities such as the organization of a course on application of satellite altimetry in oceanography & modelling, coastal erosion activities together with UNEP, UNEP/GPA & RIKZ, the establishment and hosting of technical groups—GEMPA-EA; (ii) research projects on linkages between physical processes and biological processes, effects of climate change on different habitats and species; and the publication and dissemination of information—*Western Indian Ocean Journal of Marine Science* & other forms of publications.

101 The Representative of the UN Food and Agriculture Organization outlined the Organization's regular and technical assistance programme for fisheries in the SWIO region particularly in relation to food security and improvement of livelihoods. Priorities included strengthening of fisheries management bodies, assisting in country policies and programmes to conserve and sustainably manage fishery resources, promotion of sustainable small-scale fishing activities, support of related institutions and infrastructure, support for the sustainable development of aquaculture, and assistance to countries so that they can utilize, process and market the fishery catches efficiently according to accepted international standards. Normative activities included implementation of the FAO Code of Conduct for Responsible Fisheries, and international plans of actions on eliminating illegal, unreported and unregulated fishing, reduction of subsidies, management of fishing capacity and shark fisheries. It was noted that high-level collaboration took place between the headquarters of IOC in Paris and FAO fisheries in Rome. FAO could support the African Process for development in the sustainable management of fisheries. Additionally, it regularly publishes a "Status of World Fisheries and Aquaculture" and could provide the status of fisheries at an appropriate regional level in Africa. Increasing links were possible between the Fisheries Global Information System (FIGIS) and ODINAFRICA while the FAO subregional office would provide input into the Ocean Portal for Africa. Increased collaboration was envisaged between the FAO subregional Office in Harare and the IOCINCWIO Secretariat on ongoing activities including support to participation at remote sensing workshops relevant to coastal fishing.

102 **The Regional Committee noted** the collaboration with other organizations in the region during the inter-sessional period and **instructed** the Head of IOCINCWIO Project Office to explore opportunities for further collaboration.

103 **The Regional Committee welcomed** the offer from the IOCINDIO Chairman for closer co-operation between IOCINCWIO and IOCINDIO and **adopted** Recommendation IOCINCWIO-V.3 on Strengthening Co-operation with other Regional Bodies.

9. NATIONAL AND REGIONAL CO-ORDINATION MECHANISMS

9.1 NATIONAL CO-ORDINATION MECHANISMS

104 Mr Odido introduced this item by referring to IOC Circular Letter No 2017 of 27 March 2002 on the Strengthening/Establishment of National Oceanographic Committees (NOCs).

105 The Delegate of Seychelles informed the Committee that a national oceanographic council will be established in the next few months.

106 The Delegate of Kenya stressed that the Kenya National Oceanographic Committee to which the Kenya NODC is affiliated, has been active for several years, and that it carries out required co-ordination activities.

107 The Delegate of Mozambique stated that INAHINA has been appointed as national focal point for oceanographic affairs, and that a formal NOC had been proposed and was awaiting approval by the relevant ministry.

108 The Delegate of Mauritius reported on the establishment of the Mauritius Oceanographic Institute, with the task to co-ordinate marine research. A National GOOS Committee was also set up by Mauritius.

109 The Delegate of Tanzania reported that the National Hydrographic Committee acted as NOC for his country.

110 The Delegate of Comoros stressed that though no National Oceanographic Committee has been set up in Comoros, the ODINAFRICA National Centre acts as a co-ordinating mechanism between national institutions.

111 The Delegate of Madagascar announced that a National Oceanographic Committee will soon be established with the support of the government.

9.2 REGIONAL CO-ORDINATION MECHANISMS

112 Mr Odido introduced this item, by stating that in view of the substantive growth both in terms of scientific manpower and research activities, and the strong need for an effective and Africa-based co-ordination mechanism in the region to assist the IOCINCWIO Regional Committee in planning and implementing regional research, monitoring and management programmes, the IOC Assembly, during its twentieth Session in 1999, through Resolution XX-15, endorsed the establishment of an IOCINCWIO Project Office for an initial period of two years. Subsequently a Memorandum of Understanding was signed between the Intergovernmental Oceanographic Commission of UNESCO and the Government of Kenya putting into effect the decision of the IOC Assembly.

113 **The Regional Committee expressed** strong satisfaction with the work and operations of the Project Office.

114 The Representative of Kenya, on behalf of his government restated the offer to continue hosting the Project Office within the Kenya Marine and Fisheries Research Institute, until its next review by the IOCINCWIO Committee.

115 **The Regional Committee thanked** the Government of Kenya and recommended the continuation of the Project Office in its current location until the next IOCINCWIO Session, planned for 2005.

116 **The Regional Committee reviewed** the Terms of Reference of the IOCINCWIO Project Office and decided to retain them until the next review of the Project Office in 2005. **The Regional Committee adopted** Recommendation IOCINCWIO-V.4 on Continuation of the IOCINCWIO Project Office.

10. PROGRAMME OF WORK 2002–2005

117 The Chairman recommended to the Regional Committee that it prepare a work plan for the period 2002–2005, on the basis of the deliberations of the previous Agenda items.

118 **The Regional Committee reviewed** its discussions of the Agenda items and **drafted** a comprehensive workplan (attached herein as Annex to Recommendation IOCINCWIO-V.5).

119 The Technical Secretary informed the Committee that the work plan's financial requirements exceeded by far the resources at its disposal, and that alternative sources of funding would have to be sought by the Member States and the IOC Secretariat.

120 **The Regional Committee encouraged** Member States to identify donors to complement the IOC support in order to enable satisfactory implementation of the work plan.

121 **The Regional Committee adopted** Recommendation IOCINCWIO-V.5.

11. ELECTION OF OFFICERS

122 Mr Odido reviewed the rules and practical arrangements for the election of the Chairman and Vice Chairman as they are presented in the Rules of Procedure and the relevant portions of the Guidelines for Structure and Responsibilities of the Subsidiary Bodies of the Commission (IOC Manual, Part I, Section 5). Following consultations between the delegates, Dr Jean Gervais Rafamantanantsoa of Madagascar was elected Chairman and Mr Ilidio Zacarias Goenha of Mozambique as Vice Chair for the inter-sessional period.

12. DATE AND PLACE OF IOCINCWIO-VI

123 **The Regional Committee noted** the offer of Mozambique to host the next session in Maputo in 2005 and **invited** the Secretariat in consultation with the Chairman to follow-up on the offer.

13. OTHER BUSSINESS

124 The Delegate of Kenya pointed out that the long name of the Committee had been coined at a time when South Africa was not a Member of IOC, hence the specification of North and Central Western Indian Ocean.

125 The Regional Committee requested the Chairman to investigate the possibility of changing the name of the Committee to reflect its current membership: "IOC's Regional Committee for the Western Indian Ocean –IOCWIO" and report to the next session.

14. ADOPTION OF RECOMMENDATIONS AND SUMMARY REPORT

126 **The Regional Committee adopted** the summary report of the Session and the Recommendations as they are presented in Annex II.

127 **The Regional Committee requested** the Chairman to present the Executive Summary and Recommendations to the Thirty Sixth Session of the Executive Council and the Twenty Second Session of the IOC Assembly planned for June/July 2003 in Paris, France.

15. CLOSURE

128 **The Regional Committee paid tribute** to Dr Johnson Kazungu for the very effective and competent way in which he had fulfilled his tasks as Chairman of the session. **The Regional Committee also expressed** its appreciation to the Director and staff of UNESCO Nairobi Office, and the IOCIONCWIO Project Office for the hospitality extended to all participants, and **noted with satisfaction** the wonderful arrangements for the Session.

129 The Session closed on Thursday 26 September 2002 at 15h45.

ANNEX I

AGENDA

1 OPENING

2. ADMINISTRATIVE ARRANGEMENTS

2.1 DESIGNATION OF CHAIRMAN FOR SESSION

2.2 ADOPTION OF AGENDA AND DESIGNATION OF RAPPORTEUR

2.3 CONDUCT OF THE SESSION, TIMETABLE AND DOCUMENTATION

3. REPORT ON INTERSESSIONAL ACTIVITIES

4. PROGRAMME MATTERS

4.1 OCEAN SCIENCES

4.1.1 Oceans and Climate

4.1.2 Science for Ocean and Marine Environmental Protection (SOEMEP)

4.1.3 Marine Sciences Integrated Coastal Area Management

4.2 OPERATIONAL OBSERVING SYSTEMS

4.2.1 GOOS and Related Activities

4.2.2 GLOSS

4.3 OCEAN SERVICES

4.3.1 Marine Data and Information Management (ODINAFRICA)

4.3.2 Ocean Mapping (IBCWIO)

4.4 UNESCO PROJECTS ON CROSS CUTTING THEMES

4.4.1 African Ocean Portal

4.4.2 Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa

5. CAPACITY BUILDING (TEMA) IN MARINE SCIENCES, SERVICES AND OBSERVATIONS

6. PARTNERSHIP CONFERENCE/THE AFRICAN PROCESS

7. WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

8. COLLABORATION WITH OTHER REGIONAL SUBSIDIARY BODIES, AGENCIES AND REGIONAL ORGANIZATIONS

9. NATIONAL AND REGIONAL CO-ORDINATION MECHANISMS

9.1 NATIONAL CO-ORDINATION MECHANISMS

9.2 REGIONAL CO-ORDINATION MECHANISMS

10. PROGRAMME OF WORK 2002–2005

11. ELECTION OF OFFICERS

12. DATE AND PLACE OF IOCINCWIO-VI

13. OTHER BUSSINESS

14. ADOPTION OF RECOMMENDATIONS AND SUMMARY REPORT

15. CLOSURE

ANNEX II

RECOMMENDATIONS

Recommendation IOCINCWIO-V.1

FURTHER DEVELOPMENT OF CAPACITY BUILDING IN THE IOCINCWIO REGION

Taking note of the WSSD Plan of Implementation which recognizes the role of IOC as a competent organization for building national and local capacity in marine science and sustainable management of oceans and their resources,

Recalling the existing efforts of the IOC TEMA programme and the new IOC CB-TEMA Strategy for promoting permanent capacity in IOC regions,

Further recalling the activities and objectives of WIOMSA in building local capacity through its programmes and activities,

Recognizing the disparity of marine science capacity within the region,

Noting further with appreciation the establishment of the UNESCO Chair of Marine Science and Oceanography, located at the Eduardo Mondlane University, Maputo, and inaugurated in March 1999,

Requests the IOC Secretariat to:

(i) enlarge the curriculum base of the UNESCO Chair in Marine Science and Oceanography, so as to encompass fully the training needs of the region, through the increased participation of IOCINCWIO Member States;

(ii) continue its support and technical assistance to the programmes and activities of WIOMSA;

(iii) fully develop the TEMA strategy and permanent capacity at the regional level by enhancing support for long-term training;

(iv) further strengthen collaboration between the IOCINCWIO Regional Committee with regional projects and programmes such as WIOMAP, IOI, JCOMM, and others as appropriate;

(v) assist in the development of training programmes and infrastructure to facilitate the use and application of GIS and remote sensing for the management of coastal environment, and other appropriate emerging technologies.

Encourages IOC Member States, donors, and other international organizations to assist in the development of the above initiative.

Recommendation IOCINCWIO-V.2

FOLLOW UP TO WSSD, NEPAD AND AFRICAN PROCESS

Recognising the WSSD Plan of Implementation and its actions related to sustainable development of oceans and coasts, specifically highlighted in Chapters IV, VII and VIII, and the related Type II Partnership initiatives focusing on the marine and coastal environment of Africa,

Further recognising the vision of NEPAD, especially its Environment component, into which the African Process has been integrated as the marine and coastal segment,

Noting the decision of the Heads of States attending the Partnership Conference of the African Process, held in the context of WSSD, to establish an interim Secretariat within the Environment Component of NEPAD, under the co-ordination of Senegal, with a view to facilitate the implementation of the Programme of Intervention,

Requests the IOC Secretariat to continue to facilitate the implementation of the above decisions and projects, in particular in the IOCINCWIO region;

Urges Member States to actively participate in the above programmes in accordance with the national priorities, interests, and capabilities in line with the IOCINCWIO work plan.

Recommendation IOCINCWIO-V.3

STRENGTHENING CO-OPERATION WITH OTHER REGIONAL BODIES

Recalling the close collaboration of IOC, within the implementation of IOCINCWIO-IV work plan, in particular with WMO, UNEP Regional Seas Programme, UNEP-GPA, SEACAM, WIOMSA, IOI, and COI (Commission de l'Océan Indien),

Recognising the identified role of IOC during the third meeting of the Contracting Parties to the Nairobi Convention and its recommendations,

Noting the development of regional GOOS initiatives such as GOOS-AFRICA, WIOMAP, IOGOOS, and GCOS, and other ecosystem-based programmes, including those under LME, ICRAN, EAME, FAO Fisheries Programme,

Recognizing the benefit in co-ordinating and sharing experience with other IOC regional committees such as IOCINDIO and IOCEA,

Recommends that the Chairpersons of IOCINDIO and IOCINWIO develop a Memorandum of Understanding between the two Regional Committees to promote and foster inter-regional linkages, and to identify common issues for joint implementation;

Invites regional organizations and programmes to recognize the priorities identified in the IOCINCWIO-V work plan and to assist in their implementation;

Further recommends the establishment of co-ordination mechanisms between the IOCINCWIO Regional Committee and other international and regional programmes focusing on the Indian Ocean, through effective consultation and communication.

Recommendation IOCINCWIO-V.4

CONTINUATION OF THE IOCINCWIO PROJECT OFFICE

Recalling the acceptance by the Nineteenth Session of the IOC Assembly of the offer by Kenya to host the IOCINCWIO Project Office,

Recalling the decisions by the Twentieth Session of the IOC Assembly to set up the IOCINCWIO Project Office for an initial period of two years, based at the Kenya Marine Fisheries Research Institute (KMFRI),

Further recalling the Terms of Reference of the IOCINCWIO Project Office as approved by the Twentieth Session of the IOC Assembly,

Noting the current development of Guidelines for the Establishment of IOC Decentralised Offices,

Expressing its deepest gratitude to the Government of Kenya for hosting the IOCINCWIO Project Office and **urging** it to continue to support it,

Noting with satisfaction the performance of the IOCINCWIO Project Office since 2000, in facilitating and co-ordinating the implementation of the IOCINWIO-IV work plan,

Recommends to maintain the IOCINCWIO Project Office in its current location, until further review by the IOCINCWIO Regional Committee in 2005, and in full compliance with the future Guidelines for the Establishment of IOC Decentralised Offices;

Further recommends to retain the current Terms of Reference of the IOCINCWIO Project Office.

Requests the IOC Secretariat to :

(i) maintain the current level of staff support provided to the IOCINCWIO Project Office;

(ii) provide financial support for the operational costs of the IOCINWIO Project Office until the next review of the Project Office;

Urges Member States and donor organizations to provide additional technical staff to strengthen the operations of the office.

Recommendation IOCINCWIO-V.5

PROGRAMME OF WORK 2002–2005

Recalling the successful implementation of its programme during the past intersessional period 1997–2002,

Expressing its appreciation to the Member States, donors and organizations who have provided support to IOCINCWIO during the intersessional period,

Noting with appreciation the effective establishment of the IOCINCWIO Project Office in 2000,

Recognizing the catalysing role that the IOCINCWIO Project Office has played in enhancing IOC's programmes and visibility in the region,

Noting with satisfaction that a considerable amount of training activities have been carried out, through ODINAFRICA, the UNESCO Chair in Marine Science and Oceanography, and other IOC regional programmes,

Further noting the results of WSSD and the importance of its follow-up at the national and regional level,

Recognizing the successful development of the African Process for the Development and Protection of Marine and Coastal Environment in sub-Saharan Africa, and the need to further support the implementation of the Programme of Intervention of the African Process,

Decides to adopt the Programme of work for IOCINCWIO for the period 2002–2005, as indicated in the table annexed to this recommendation;

Urges Member States to actively participate in the IOCINCWIO programme in accordance with their national priorities, interests and capabilities;

Requests the IOC Secretariat, other organizations and donor agencies to assist in the implementation of the 2002–2005 Programme of Work of the IOCINCWIO Regional Committee.

WORK PLAN 2002–2005

PROGRAMME AND ACTIVITIES	PARA	TIME AND BUDGET				LINKAGE TO OTHER IOC PROGRAMES
		2002	2003	2004	2005	
OCEAN SCIENCES						
OCEANS and CLIMATE						
• Establishment of Regional Group of Expert on Ocean Dynamics and Climate to simulate oceanographic research through the participation of WIO scientists, and in particular to address the analysis and interpretation of data collected in the region from Global Programmes such as CLIVAR, JGOFS, WCRP, etc. (preparation of Terms of Reference, designation of experts and two meetings in intersessional period).	22-24		8K		8K	GOOS
• Organization of Regional WOCE Workshop in order to foster national participation in international planning and implementation through focused workshop to enhance capabilities to participate in and benefiting from such an international programme.			25K			GOOS IODE
• Ocean modelling: training in Ocean modelling, and application of available models through collaborative approach with other interested agencies and organizations (regional training workshop; provision of forecast models to participating institutions; development of partnerships with national/regional/ international scientific organizations including exchange of data for forecast models; and identification of historical data, data types to be monitored at the local level, and local experts/institutions willing to collaborate in ONR programmes)				25K		GOOS IODE
• Ocean Data Management under CLIVAR/GODAE *Lead to be taken by IOCINCWIO Project Office and ODINAFRICA Co-ordinator* *Partners: WOCE, DMC, WMO,* CLIVAR, JGOFS, WCRP, GCOS, SOLAS, *ONR, DMC, UEM*						GOOS IODE
TOTAL			33K	25K	8K	

PROGRAMME AND ACTIVITIES	PARA	TIMING AND BUDGET				LINKAGE TO OTHER IOC PROGRAMES
SCIENCE FOR OCEAN ECOSYSTEMS AND MARINE ENVIRONMENTAL PROTECTION		2002	2003	2004	2005	
• Sustain a regional monitoring programme for potentially Harmful Algal Blooms through: regular sampling programme; training of scientists from countries that have not participated so far; Integration of HAB taxonomy and monitoring training in UNESCO Chairs; Build public awareness in the region on HAB occurrence and implications for local communities public health issues; development of contingency plans to manage to the occurrence of HABs through development of protocols; and Setting up of a regional database on occurrence of HABs, possibly through ODINAFRICA.	28-29		20K	53K	33K	TEMA and HAB IODE
• Sustaining MASDEA Biodiversity database (Provide support for the visit of regional scientists to the Flanders Marine Institute for technical training; Host institution to provide hands on training; Assessment of capacity for collecting marine biodiversity data and applications; and Networking of marine biodiversity data collecting institutions in the region through ODINAFRICA).			8K	6K	6K	IODE
• Establishment of a LME Programme for the Mascarene region (Co-ordinate the development of a scientific assessment to justify (or not) the classification of the Mascarene region as LME; and assist in identifying support for the preparation of a funding proposal to be submitted to GEF)			10K	10K		GOOS
• Development of capacity for 'Rapid Assessment of Marine Pollution (RAMP)' Techniques - including Mussel Watch. (Training workshop for regional scientists in RAMP techniques, Development of Pilot site monitoring activities using RAMP techniques).				60		
IOCINCWIO Project Office to initiate the activity by approaching regional international and regional organizations potentially interested in this issue *Partners: VLIZ, IUCN, CBD, FAO, ICLARM, GEF, UNESCO, Indian Ocean Tuna Commission, FAO/SADC, UNEP, GPAHAB-Copenhagen, NOAA, IUCN, World Bank*						
MARINE SCIENCE FOR INTEGRATED COASTAL AREA MANAGEMENT		2002	2003	2004	2005	
• Use of remote sensing and GIS for the compilation of coastal zoning and sensitivity plans.	30-34		18			GOOS, IODE
• Development and validation of indicators for regiona/local ICAM Projects (Adapt global methodology to WIO region; test application of environmental, socio-economic, and governance indicators to regional/local projects through the organization of a regional workshop).			5	25		
• Identify information, data, and products requirement for the development of local ICAM plans and organise a training course on this issue 'Managing information for ICAM'.				25		ODINAFRICA
• Assessment and long-term monitoring for shoreline change (Needs assessment, Strengthen pilot projects into more sustained monitoring, training workshop on coastal erosion monitoring techniques and mitigation measures, Development of risk assessment methodologies for shoreline change).			40K	20K	15	
IOCINCWIO in consultation with IOC/ICAMUNEP Regional Seas *Partners: WIOMSA, SEACAM, IOI, COI, UNEP, FAO, RCMRD, Department of Fisheries Canada*						

OCEAN SERVICES		2002	2003	2004	2005	
Marine Data and Information Management						
• Implementing activities identified in ODINAFRICA-II (Ocean Data and Information Network in Africa) in order to improve the capacity marine science institutions in WIO to acquire, archive, analyse, and interpret ocean data and information, as well as prepare and disseminate data and data products. Support for information exchange, data archaeology and rescue, publicity and public awareness programmes.	55-58	31K	287.9	8K		All IOC programmes
• Further development and strengthening of data and information centres in the WIO region focusing on development and provision of data and information products, especially those required for integrated coastal management –through another phase of ODINAFRICA (specialized training and internships/ attachments, renewal and upgrade of equipment including audiovisual aids, electronic journal, continued support for information exchange).				223K	200	All IOC programmes
• Improvement of Internet access using VSAT and other available technologies (installation and access fees).			76K	36K	36K	
African Ocean Portal developed in order to improve networking and access to information (regional editors, technical editor, awareness campaign, workshop, content editors, equipment, etc.)	69	37K	24K	24K	24K	
OCEAN MAPPING						
• Meeting of Editorial Committee for IBCWIO. • Development of high resolution maps for shallow water areas *Partners: SAISHC*	60 63		10K		10K	
OPERATIONAL OBSERVING SYSTEMS						
• Replacement/upgrading of existing tide gauges and installation of new tide gauge stations. • Equipping the existing stations with sensors for measuring Oceanographic and Meteorological parameters (temperature, salinity, currents, winds, etc.). • Offshore moorings of floats at suitable locations in WIO. • Training of technicians in installation and maintenance of gauges; processing and QC of data. • Enhance contribution of the region to GOOS and other global programmes by providing near real-time observations of Ocean parameters; Improve communication facilities existing in the countries for data transmission.	44		45K 30K 35K	45K 30K 5K 35K	45K 30K 5K	
• Networking of experts and institutional capabilities of available remote sensing centres in WIO and strengthening of these centres. (Joint activities and partnerships with the R/S institutions and the African Association of the Remote Sensing for Environment, Questionnaires and website, Incorporate Remote sensing applications in UNESCO Chair).	35-42					
• Strengthen the capability of the institutions in the region to access and utilize remote sensing data (Training course on application of satellite altimetry and oceanography, provision of software for analysis and interpretation of satellite data).	71	12K			10K	IODE, ODINAFRICA
Implemented through: IOCINCWIO Project Office in co-ordination with WIOMAP, ODINAFRICA, GOOS AFRICA and the UNESCO Cross cutting project on "Application of Remote Sensing for Integrated Management of ecosystems and water resources in Africa" *Partners: WMO, WIOMSA, IRD (France), RCMRD, DMC, STATIONSEAS Lead: IOCINCWIO Project Office*	46	25K				

PROGRAMME AND ACTIVITIES	PARA	TIMING AND BUDGET				LINKAGE TO OTHER IOC PROGRAMES
CAPACITY BUILDING						
Enhance the regional capacity in oceanography (physical, biological and chemical) • Regional Training course on article 76 of UNCLOS • Participation in cruises • Assessment mission to Comoros and Madagascar • Exchange of staff and students between research institutions and universities (within framework of UNESCO Chair) • provision of training fellowships, and development of long-term regional training programmes • Assessment of regional Capacity Building-TEMA needs (by IOCINCWIO Project Office) • Development of training initiatives in collaboration with interested organizations • Continue support and technical assistance to programmes and activities of WIOMSA • Enlarge curriculum base of the UNESCO Chair to encompass fully the training needs of the region • Specialised Marine Application Centres (WIOMAP and ROOFS-Africa) *Lead: IOCINCWIO Project Office, other institutions as appropriate Implementation:* *Partners: CLCS, UNDOALOS, UEM (UNESCO Chair), POGO, WIOMSA, JCOMM*	73, 75, 76 Rec 1		59K 5K 8K 10K 60K 5K 10K 15K	5K 10K 60K 10K 15K	5K 10K 60K 10K 15K	All IOC programmes
Development of training programmes and infrastructure to facilitate the use and application of GIS and remote sensing for the management of coastal environment and other appropriate emerging technologies • Short and long term fellowships • Infrastructure for GIS (equipment and software) • Development of data and information products using GIS • Regional training course on use of GIS *Lead taken by IOCINCWIO Project Office, and IOC/ICAM* *Partners: SEACAM, WIOMSA, IOI, UNEP, COI, RCMRD, STATIONSEAS, FAO*	29, 34		20K 30K	20K 60K 30K	20K 30K	IOC/ICAM IODE GOOS
CO-ORDINATION						
• IOCINCWIO Project Office • Regional awareness meeting on policy interface of ICAM • Follow-up to African Process, NEPAD and WSSD • MoU with IOCINDIO • Consultation and co-ordination with other programmes (e.g. GOOS-AFRICA, WIOMAP and IOGOOS) • IOCINCWIO-VI	113 32 85, 92, Rec 4 121		50K 25K 10K	50K 10K	50K 10K 25K	All IOC programmes
			135K	170K	135K	
TOTALS FROM ALL PAGES		105K	948.4K	900K	655.5K	

Grand Total: USD2,609,900

ANNEX III

OPENING ADDRESS

by Hon. Isaac Ruto, Minister For Environment, Kenya

(Read on his behalf by Mr Mutia)

Representative of Executive Secretary IOC-UNESCO – Mr Julian Barbière
Distinguished representatives of UNEP and other UN bodies,
Distinguished Guests from different organizations
Distinguished Delegates and Scientists,

I would like to take this opportunity to welcome you all to this very important session of the IOC Regional Committee for the Co-operative Investigation of the North and Central Western Indian Ocean (IOCINCWIO). On behalf of the government of Kenya, I also take this opportunity to welcome to Kenya those guests who travelled from outside Kenya.

We note with great appreciation the long way the African process—linking oceans and environment—has come since mid and late nineties. The African Process, which was also recently presented in South Africa during the just ended World Summit on Sustainable Development, has galvanized our countries into appreciating the need for urgent action on management of our oceans and the coastal environment.

As you may all be aware, coastal ecosystems are currently experiencing critical and amplified changes linked to climate change and uncontrolled anthropogenic activities. Most of our low-lying areas worldwide are more vulnerable to shoreline changes. For the Kenyan case, a number of our beach hotels are now spending much more in trying to fight coastal erosion by erecting barriers. This however offers temporary solution and better environmentally friendly options need to be investigated. Africa as a region therefore needs to support the Global Sea Level Observing System (GLOSS) implemented by the Tropical Oceans and Global Atmosphere (TOGA) programme. We appreciate the fact that these programmes form part of the wider IOC initiatives also covering the Western Indian Ocean region.

Part of Africa's perspective and vision is to develop a fully operational regional oceanographic network for long-term collection, co-ordination, quality control and distribution of different types of marine and oceanographic derived products of worldwide interest and utility. We recognize the vital need of enhancing marine observing network, data management and communication facilities in the region. The concept of Western Indian Ocean Marine Application Project of bringing together the meteorological and oceanographic communities is therefore appreciated and needs to be supported within the region.

Distinguished Delegates,

Another area of great concern for the region, which IOC should try to address, is capacity building and acquisition of necessary equipment for oceanographic measurements. Training is needed to bridge the growing imbalance between the developed and developing countries especially in GOOS related sciences and services.

It is also noted that most oceanographic equipment are expensive and out of financial abilities of most marine related institutions in Africa. A mechanism should therefore be developed to address this problem for the benefit of advancing marine science in the region. I believe and trust that this major handicap will also be extensively deliberated upon during this particular workshop when addressing capacity building.

Distinguished Delegates, I also wish to take this opportunity to thank the Executive Secretary of IOC, Dr Patricio Bernal for the continued support IOCINCWIO region has received in the recent past. I am made to understand that almost 70% of the issues identified during IOCINCWIO-IV meeting in 1997 have been successfully tackled within the IOC programmes. This is highly commendable.

We would also wish to commend the Head of the IOCINCWIO Project Office, Mr Mika Odido for steering the affairs of the projects very professionally since the office was established in Kenya two years ago.

On behalf of the Kenya Government, I would like to further re-affirm Kenya's commitment to the implementation of the IOC programmes in the region.

Kenya has hosted the Regional Information Centre (RECOSCIX-WIO) since 1991 and the IOCINCWIO Project Office since 2000 at the Kenya Marine and Fisheries Research Institute (KMFRI), Mombasa. KMFRI will continue availing its facilities and staff for the service of the IOC activities in the region. It is pleasing to note that a proposal has also been submitted to different development partners to help expand KMFRI facilities to meet modern day challenges in marine research and dissemination of marine related information. The Government of Kenya, requests IOC to support this initiative, for the benefit of marine science in the region.

Distinguished Delegates,

I know you have a lot of work ahead and I therefore would like to wish you very fruitful deliberations and a nice stay in Nairobi.

Thank you.

ANNEX IV

LIST OF DOCUMENTS

IOCINCWIO-V/1 prov.	Provisional Agenda
IOCINCWIO-V/1 Add. prov.	Provisional Time Table
IOCINCWIO-V/2	Annotated Provisional agenda
IOCINCWIO-V/3	Draft Summary Report
IOCINCWIO-V/4 prov.	Provisional List of Document
IOCINCWIO-V/5 prov.	Provisional List of Participants
IOCINCWIO-V/6	Report on Intersessional Activities
IOCINCWIO-V/7.2	Report on National Activities- Kenya
IOCINCWIO-V/7.3	Report on National Activities- Madagascar
IOCINCWIO-V/7.3	Report on National Activities- Seychelles
IOCINCWIO-V/7.7	Report on National Activities- Tanzania
IOCINCWIO-V/8	Western Indian Ocean Marine Applications Project
IOCINCWIO-V/9	Report of the UNESCO Chair on Marine Sciences and Oceanography
IOCINCWIO-V/10	Training on Article 6 of UNCLOS
IOCINCWIO-V/11	Indian Ocean GOOS
IOCINCWIO-V/12	African Ocean Portal
IOCINCWIO-V/13	IODE Report for IOCINCWIO
IOCINCWIO-V/14	GLOSS Report for IOCINCWIO
IOCINCWIO-V/15	Application of Remote Sensing for Integrated Management of Ecosystem and Water Resources in Africa
IOCINCWIO-V/16	Regional Ocean Observing and Forecasting System for Africa - ROOFS-AFRICA
IOCINCWIO-V/17	GIS for Management of Marine and Coastal Environment in IOCINCWIO
IOCINCWIO-V/18	Electronic Publishing

INFORMATION DOCUMENTS

1. Report of the fourth session IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean (6-10 May 1997 Mombasa, Kenya)
2. IOC Manuals and Guides No.41 Potentially Harmful Microalgae of the Western Indian Ocean
3. IOC Manuals and Guides No.40 Guidelines for the study of Shoreline Change in the Western Indian Ocean.
4. IOC Directory
5. SC-2000/WS/57 IOC Statutes

6. IOC/INF-1169 IOC Rules of Procedure
7. Brochures for Ocean Services Section, Ocean Sciences Section and Operational Observing Systems
8. One Ocean One Planet
9. IOC workshop report no. 172 IOC-Flanders-IPIMAR Workshop on Ocean Data Management in the IOCINCWIO Region (ODINEA Project)
10. GOOS Capacity Building
11. ODINAFRICA Progress Report IOC/INF/1171
12. The African Process for the Development and Protection of the Marine and Coastal Environment in Sub-Saharan Africa
13. Position Paper on the Status of GLOSS in Africa IOC/INF-1165
14. Contribution of IOC to WSSD
15. Revised Proposal on IOC Programme and Budget
16. WSSD Plan of Implementation

ANNEX V

LIST OF PARTICIPANTS

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ANNEX VI

REPORT ON INTER SESSIONAL ACTIVITIES

The following is a brief overview of the activities of the Intergovernmental Oceanographic Commission of UNESCO during the inter-sessional period 1997-2000.

This was a very active period with many events taking place and a high level of implementation of the IOCINCWIO work plan compared to the previous inter-sessional periods. Thanks to substantial extra-budgetary support provided by the Government of Sweden of approximately 250,000US$/year over the ten-year period 1989-1999, and approximately US$300,000 provided by the Government of Flanders in Belgium for the ODINEA project (1997-2000), we were able to implement quite a number of activities in the region during the inter-sessional period. These resources were however insufficient to implement all the activities envisaged in the IOCINCWIO-IV Work Plan. In addition to this the government of Flanders, Belgium has also provided about US$2.3 million to support the development of the Ocean Data and Information Network for Africa, involving 20 African countries from both IOCEA and IOCINCWIO in the period 2000-2003. An external evaluation of the project was very positive and recommended the continuation of the project beyond 2003.

The IOCINCWIO Project Office was officially inaugurated on 8th February 2000 at the Kenya Marine & Fisheries Research Institute (KMFRI) Headquarters in Mombasa, Kenya. The office was established following the endorsement of the 20th session of the IOC Assembly in 1999 through Resolution XX-15 and was to be hosted for an initial period of two years by KMFRI. The Assembly took into consideration substantive growth both in terms of scientific manpower and research activities, and the strong need for an effective and Africa-based co-ordination mechanism to assist the Regional Committee in planning and implementing regional research, monitoring and management programmes. The establishment of the Regional Project Office provided continuity, and enabled the implementation of IOCINCWIO activities when both the Chairman and Vice Chairman of the Regional Committee ceased to hold their positions during the inter-sessional period.

1. PROGRAMME MATTERS

1.1 OCEAN SCIENCES

1.1.1 Oceans and Climate

The previous sessions of the Regional Committee had expressed concern on the minimal participation of institutions and experts from the region in global initiatives such as TOGA, JGOFS and WOCE. IOCINCWIO-IV identified three actions that needed to be taken: improvement of long-term monitoring of all oceanographic parameters, inclusion of scientists from the region in the planning as well as implementation and analysis stages of visiting expeditions, and establishment of a Group of Experts on Ocean Dynamics and Climate. The data from these global initiatives have been made available to institutions in the region through the ODINAFRICA network while several scientists from the region participated in WOCE cruises in the Indian Ocean.

1.1.2 Science for Ecosystems and Marine Environmental Protection

The fourth session of IOCINCWIO-IV adopted recommendations for a project to establish a network of harmful algae researchers, enhance research capability in the region, produce a guide for identification of potentially harmful marine microalgae in IOCINCWIO coastal waters. The survey was initiated under the co-ordination of the HAB Centre in Copenhagen, Denmark. Two training courses were held in Zanzibar, Tanzania (1999), and Reunion (March 2000). Five national institutions participated in the sampling, identification and analysis of the microalgae: Kenya

Marine and Fisheries Research Institute (Kenya), Centre National de Recherche Océanographique (Madagascar), Albion Fisheries Research Centre (Mauritius), Agence pour la Recherche et la Valorisation Marine (Réunion, France), and the Institute of Marine Sciences (Zanzibar, Tanzania). The results are available in the **IOC Manuals and Guides No. 41 *"Potentially Harmful Microalgae of the Western Indian Ocean- A Guide Based on preliminary Survey"*** which has been produced in English and French and distributed to institutions in the region. The guide will be an important tool for future monitoring and research purposes.

The Marine Species Database for Eastern Africa, initially developed by RECOSCIX-WIO, has been maintained by the Kenya Marine and Fisheries Research Institute in collaboration with the Flanders Marine Institute (Vlaams Instituut voor de Zee- VLIZ). The database contains information on species available in the region, their distribution and the literature from which the information was derived (authorities). There has been quite a bit of input into the database and quality checking. All records from Fishbase 2000 have also been extracted and added to the database. The next step is to create some 'deep linking' (i.e. straight to the relevant records) to the online Fishbase database. The web site (htttp://www.vliz.be/vmdc/masdea/about.htm) continues to perform well and attracts a regular number of hits. For the first four months of the year, there were nearly 3,000 hits. Several scientists active in the region have responded to the web site, offering new information. VLIZ has offered to hosting scientists from IOCINCWIO on a study visit. Topic of a study visit can be either on the level of content (probably cleaning up and finalising a specific taxonomic group, in collaboration with taxonomic experts from Belgium, and making use of the library facilities here), or technical (like e.g. upgrading MASDEA, by translating it into the format of our newer, and more sophisticated biogeographic databases we have now developed). These visits can be organised in collaboration with the Belgian Royal Institute of Natural History. However resources will have to be identified to cater for travel and subsistence.

IOC, in collaboration with UNEP organised a training course on Sea grass remote sensing for Eastern Africa coastal states in 1997. However due to limited resources no similar course has been organised for the island states. The monitoring of nutrients, sediments and turbidity was implemented in Kenya, Mauritius, Seychelles and Tanzania in 1997/98. Not much was done on organic pollutants and heavy metals study.

The "Guidelines for study of shorelines changes in the Western Indian Ocean region" was published as IOC Manuals and Guides No. 40. Pilot studies to classify and assess susceptibility to change using the guidelines have been undertaken at the following sites: Bamburi-Shanzu Beach area in Kenya (Kenya Marine & Fisheries Research Institute), Macaneta Beach in Mozambique (Edouardo Mondlane University), and Kunduchi Beach in Tanzania (Institute of Marine Sciences).

IOC and the Indian Ocean Commision (COI) also implemented a project on Pilot Sensitivity Mapping of the shallow waters of Mahe, Seychelles in 1997/1998. A methodological guide on sensitivity mapping for the Western Indian Ocean was published in English and French.

1.1.3 Marine Sciences for Integrated Coastal Area Management

A workshop on Data and Information Requirements for Integrated Coastal Area Management was held in Cape Town, South Africa in December 1999. The workshop brought together the heads of the ODINAFRICA data centres and ICAM experts from the region.

The Pan African Conference on Sustainable Coastal Management (PACSICOM), held in Maputo, Mozambique in 1998 as part of the International Year of the Ocean celebration gave rise to a number of interesting developments, which will be discussed later in the report. IOC-UNESCO has been actively involved in implementing the follow-up actions that were recommended during PACSICOM through the ODINAFRICA, GOOS-AFRICA and the African Process.

IOC-UNESCO has also provided support for ICAM training programmes in the region.

1.2 OPERATIONAL OBSERVING SYSTEMS

1.2.1 GOOS and Related Activities

IOC-UNESCO has sponsored or co-sponsored several initiatives aimed at improving the Ocean Observing Systems in the region. The proposal for a Western Indian Ocean Marine Applications Project (WIOMAP) has been developed and will be finalised at a workshop in Mauritius in November 2002. The GOOS-AFRICA Committee, which was established at the Pan African Conference on Sustainable Coastal Management organised a workshop in Nairobi, Kenya in November 2001. A drafting group was selected to prepare a proposal for a Regional Ocean Observing and Forecasting System for Africa (ROOFS-AFRICA). The proposal was endorsed by the Partnership Conference as part of the projects in the African Process. In an effort to advance the development of GOOS in the Indian Ocean basin, for the benefit of IOC Member States, the IOC established the IOC Perth Regional Programme Office, in 1999, with the help of Australian funds. The office has organised an Indian Ocean GOOS workshop to be held in Mauritius in November 2002. IOC was represented at a several meetings held in Kisumu and Nairobi, Kenya to develop a Regional Global Climate Observing System.

1.2.2 Global Sea Level Observing System

The fourth session of IOCINCWIO approved the implementation of a project to bring together and analyse all sea-level data which have been collected in the Western Indian Ocean region with a view to identifying gaps in observations that need to be filled, and assessing variability of sea-level and long-term trends in the region. Seven status reports for Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa, and Tanzania were prepared by national experts. The two co-ordinators of the project prepared a Regional Report and a status report for Comoros, the French Indian Ocean Islands and Somalia. On the basis of these reports and other available information, the GLOSS Regional Co-ordinators for IOCEA and IOCINCWIO prepared a “Position Paper on the Status of GLOSS in Africa” for the GOOS-AFRICA meeting held in Nairobi in November 2002. This is available as document IOC/INF-1165.

A training course for technicians involved in the maintenance of tide gauges was held at Cape Town University in November 1999. Another training course on Application of Satellite Altimetry in Oceanography, which was planned jointly with WIOMSA and IRD for this year, has been postponed to 2003

1.3 OCEAN SERVICES

1.3.1 Ocean Data and Information Network for Africa- Phase I

The first phase of the project for the development of the Ocean Data and Information Network for Africa (ODINAFRICA-I) in the IOCINCWIO region was completed in December 2000. A review workshop was held prior to the IODE-XVI in Lisbon, Portugal in November 2000. Starting with just two National Oceanographic Data Centres (NODCs) in Kenya and South Africa in 1997, additional NODCs/DNAs have been established in Madagascar, Mauritius, Seychelles, Tanzania, and a subsidiary national oceanographic data centre was created in South Africa. The capacity of the data centres to collect, process, archive and interpret various categories of data sets was strengthened through the provision of up-to date computer equipment, software as well as training for data centre personnel. This capacity has been used effectively in developing national meta databases and data archives, thus contributing to the preservation of information and enabling users to access available datasets, including those from regional and international data centres.

Email and Internet connections provided through the project have improved communication between the institutions, with others outside the region, and also improved access to international data and information sources. The connections enabled the centres to publicize their activities, services and products to a wider audience by developing web sites. A regional input centre for the Aquatic Sciences and Fisheries Abstracts (ASFA) database was established at the Kenya Marine and Fisheries Research Institute in Mombasa. This has substantially increased the number of articles published by scientists from the region that are now included in the ASFA database.

In order to further strengthen the centres to be able to effectively discharge their responsibilities, and on the basis of the experiences in the first phase of the ODINEA/ ODINAFRICA project, the participants made several recommendations which have been incorporated in the implementation of ODINAFRICA-II (see IOC Workshop Report No.172). The expertise and experience acquired in the first phase of the project will be used by closely involving the IOCINCWIO data centre managers in the ODINAFRICA data management-training programme in the IOCEA region (South-South co-operation).

1.3.2 Ocean Data and Information Network for Africa- Phase II

The commencement of implementation of the second phase of ODINAFRICA was re-scheduled due to delays in transfer of the funds to the Intergovernmental Oceanographic Commission of UNESCO. Though it had been envisaged that the project would commence in May 2000, it was not until August that the funds were transferred to UNESCO. Due to the already tight schedule planned for the second half of the year, including the sixteen session of IODE and the final workshop for the Ocean Data and Information Network for Africa, Phase I, it was not possible to start the implementation of planned activities. The co-ordinators, in consultation with the participating institutions decided to defer the commencement of the project to January 2001. Consequently all the activities planned for 2000 were moved forward.

In the first year of implementation of the project (2001), a considerable amount of resources was spent on procurement of equipment and software, as well as setting up of data and information centres. The funds allocated to training and development of services and products increases progressively during the implementation of the project. These two items (training and services/products) are allocated the bulk of the funds available (42%). Though good progress was made in implementing the work programme for 2001, the pace for 2002 has been much slower due to administrative delays caused by the change in the UNESCO financial management system.

1.3.3 Ocean Mapping

Good progress had been achieved in International Bathymetric Chart of the Western Indian Ocean (IBCWIO), which had met in Mauritius in July 2000. From the 21 sheets under construction two have now been published, namely nos. 1.04 and 1.07 by Germany. Sheets nos. 1.03 and 1.06 are in the final stages in the construction of the publication by the Russian Federation. South Africa has indicated that it will soon issue the first of its sheets. At present, Prof. Bettac, the Chief Editor is supervising the finalization of sheet no. 1.10 (Mozambique), which will be printed end of this year in Germany. The Editorial Board of IBCWIO (which will meet next in early 2003) is composed of 9 experts from Mozambique, Kenya, Mauritius, Russia, UK, USA, the IHO (Monaco), South Africa (Vice-Chairman) and Germany (Chairman).

1.4 UNESCO PROJECTS ON CROSS-CUTTING THEMES.

The Executive Board of UNESCO (at its 160th session) endorsed the Director-General's proposal to designate two *cross-cutting themes, namely (i) eradication of poverty, especially extreme poverty, and (ii) the contribution of the new information and communication technologies to the*

development of education, science, culture and the construction of a knowledge society, as priority area for the next biennium, which must be addressed by all Sectors. As results, interdisciplinary and intersectoral projects connected with the two cross-cutting themes mentioned above have been developed and were selected by the college of ADGs. IOC is leading/participating in three inter-sectorial projects, two of them will be implemented in Africa: Both of them fall under the theme: *The contribution of information and communication technologies to the development of education, science and culture and the construction of the knowledge society***:**

- UNESCO Knowledge Portal (US$2,000,000) (UNESCO/IOC Regional Ocean Portals) for Africa and Caribbean and South East Asia ;
- The application of remote sensing for integrated management of ecosystems and water resources in Africa (US$400,000).

These two projects will be presented to you during the session.

2. CAPACITY BUILDING (TEMA) IN MARINE SCIENCES, OBSERVATIONS, SERVICES AND OBSERVATIONS.

Given the large need, compared with the small size of the IOC budget, the aim is to widen the effectiveness of IOC's capacity building through partnerships with other organizations. Some of the activities implemented in the inter-sessional period include:

- support for the UNESCO Chair in Marine Sciences and Oceanography at Edouardo Mondlane University in Maputo, Mozambique;
- fellowships for participation in short-term training courses, workshops and conferences;
- fellowships were provide to enable nine researchers from Kenya, Madagascar, Mauritius, Mozambique and Tanzania to attend a Training Course on Tropical Coastal Ecology, management and Conservation (6 July - 20 August 1999) organised by the University of Nairobi and the Kenya Marine and Fisheries Research Institute;
- Support for the participation of five people from Kenya, Madagascar, South Africa and Tanzania in the Training course on Integrated Coastal Area Management for Practitioners in the Western Indian Ocean (1-12 march 1999 Mombasa, course which was organised by WIOMSA in collaboration with the Coastal Resources Centre (University of Rhodes), with support of USAID.
- Fellowship to enable experts from the region to attend various conferences, workshops and symposia and short training courses of up to 3 months.

6. PARTNERSHIP CONFERENCE/THE AFRICAN PROCESS

In 1998, the Cape Town Conference on Development and Protection of the Marine and Coastal Environment in sub-Saharan Africa, following the PACSICOM Conference (Maputo, Mozambique, 1998), recommended to organize a Partnership Conference in 2002, which would bring African States and the donor community together with a view to seek and increase support for the development of intervention project proposals for the Development and Protection of the Coastal and Marine Environment in sub-Saharan Africa.

A Preparatory Committee for the organization of the Partnership Conference was established. ACOPS was designated as facilitator of the African Process and was assigned the task

of developing a GEF medium-size project (MSP) proposal as a tool for preparing a set of proposals addressing the marine and coastal issues. In September 2000, ACOPS signed an agreement with IOC/UNESCO to jointly implement the GEF MSP and provide technical assistance in the organization and running of the national teams and working group. IOC also provided a financial and human assistance to the GEF MSP. This Partnership Conference, held in September 2002, at the level of Heads of States, at the World Summit on Sustainable Development (WSSD), Johannesburg, closes the first cycle of this initiative with the development of a Programme of Interventions, including a portfolio of 19 projects. During this international conference, the African Process has been included into chapter VIII on "Sustainable Development for Africa" of the Plan of Implementation for the WSSD: 56.i *"Develop projects, programmes and partnerships with relevant stakeholders and mobilize resources for the effective implementation of the outcome of the African Process for the Protection and Development of the Marine and Coastal Environment"*. Details of this will be provided during the session.

3. COLLABORATION WITH OTHER REGIONAL SUBSIDIARY BODIES, AGENCIES, AND REGIONAL ORGANIZATIONS

IOC has collaborated closely with several organizations in the implementation of the IOCINCWIO work plan since IOCINCWIO-V. This includes WIOMSA, with which several capacity-building initiatives have been organised jointly with COI (Commission de l'Océan Indien), IOI, SEACAM, UNEP, and WMO.

The Third meeting of the contracting parties to the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African region (also called the Nairobi Convention) was held in Maputo, Mozambique, 5- 7 December 2001 (COP-3). Recognising the importance of communication, information dissemination and networking as tools for any effective management approach, COP-3 approved the implementation of a new theme on "Cross-Cutting Issues" in its work programme for the next biennium (2002-2003) which comprises of two major components namely: dissemination and exchange of information and emerging issues. IOC was identified as a partner in initiating, co-ordinating and implementing activities related to shoreline changes, emerging issues as well as information dissemination and exchange.

IOC-UNESCO has continued to co-operate closely with the Western Indian Ocean Marine Science Association (WIOMSA) in implementing activities in the region. IOC provided funds to WIOMSA to support the participation of marine scientists from the region in the second WIOMSA scientific symposium held from 22-25 October 2001 in Dar-as-Salaam, Tanzania. There were over 80 oral and poster presentations divided into five groups as follows: Social Sciences Management and Research programmes; Ecology (mangroves, Corals, Seagrasses, Seaweeds and Planktons); Fisheries and Marine Mammals; Groundwater, Geology and Physical Processes; and Pollution, Pesticides and Nutrients. IOC is planning, together with WIOMSA to hold a training course on Application of Satellite Altimetry in Oceanography.

ANNEX VII

LIST OF ACRONYMS

ABE-LOS	Advisory Body of Experts on the Law of the Sea
ACOPS	Advisory Committee on Protection of the Sea
AIMS	Analysis, Interpretation, Modelling and Synthesis (WOCE)
Argo	GODAE global profiling float project (not an acronym)
ASFA	Aquatic Sciences and Fisheries Abstracts database
CBD	Convention on Biological Diversity
CD-ROM	Compact disk – read only memory
CLCS	Commission on the Limits of the Continental Shelf
COI	Commission de l'Océan Indien
CLIVAR	Climate Variability and Predictability Programme (WCRP)
CoML	Census of Marine Life
COP	Conference of the Parties
CSD	Commission on Sustainable Development (UN)
DMC	Drought Monitoring Centre
DNA	Designated National Agency (IODE)
ESA	European Space Agency
FAO	Food and Agriculture Organization of the United Nations
FIGIS	Fisheries Global Information System
GCOS	Global Climate Observing System (WMO-ICSU-IOC-UNEP)
GCRMN	Global Coral Reef Monitoring Network
GEBCO	General Bathymetric Chart of the Oceans
GEF	Global Environment Facility (World Bank-UNEP-UNDP)
GEMPA-EA	Group of Experts on Marine Protected Area Eastern Africa (UNEP Regional Seas)
GE-ODC	Group of Experts on Ocean Dynamics and Climate
GEOHAB	Global Ecology and Oceanography of HABs (IOC-SCOR)
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (IMO-FAO-UNESCO-WMO-WHO-IAEA-UN-UNEP)
GIPME	Global Investigation of Pollution in the Marine Environment
GIS	Geographic Information System
GIWA	Global International Water Assessment

GLOBEC	Global Ocean Ecosystems Dynamics Programme (SCOR, IOC, IGBP/ICSU)
GLODIR	Global Directory of Marine (and Freshwater) Professionals
GLOSS	Global Sea-Level Observing System
GODAE	Global Ocean Data Assimilation Experiment
GODAR	Global Oceanographic Data Archaeology and Rescue Project (IODE)
GOOS	Global Ocean Observing System (IOC-WMO-UNEP-ICSU)
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (UNEP)
HAB	Harmful Algal Blooms
IBCWIO	International Bathymetric Chart of the Western Indian Ocean
ICAM	Integrated Coastal Area Management
ICLARM	International Centre for Living Aquatic Resources Management
ICM	Integrated coastal zone management
ICRAN	International Coral Reef Action Network
IHO	International Hydrographic Organization
IMO	International Maritime Organization
IMS	Institute of Marine Sciences of the University of Dar es Salaam, Tanzania
INAHINA	Instituto Nacional de Hidrografia e Navegação
IOCEA	IOC Regional Committee for the Central Eastern Atlantic
IOCINDIO	IOC Regional Committee for the Central Indian Ocean
IOCINCWIO	IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean
IODE	International Oceanographic Data and Information Exchange
IOGOOS	Indian Ocean GOOS
IOI	International Ocean Institute
IRD	Institut de Recherche pour le Développement
IUCN	World Conservation Union
JCOMM	Joint Technical Commission for Oceanography and Marine Meteorology (WMO-IOC)
JGOFS	Joint Global Ocean Flux Study (IGBP)
KMFRI	Kenya Marine and Fisheries Research Institute
LME	Large Marine Ecosystem
LOICZ	Land-Ocean Interaction in the Coastal Zone (IGBP)
MARG	Marine Research Grant
MASMA	Marine Science for Management

NASA	National Aeronautics and Space Administration (USA)
NEPAD	New Partnership for Africa's Development
NOAA	National Oceanic and Atmospheric Administration (USA)
NOC	National Oceanographic Committee
NODC	National Oceanographic Data Centre (IODE)
OAU	Organization of African Unity (recently changed to African Union- AU)
ODINAFRICA	Ocean Data and Information Network for Africa (IOC and Flanders)
ODINEA	Ocean Data and Information Network for Eastern Africa
ONR	Office of Naval Research (USA)
POGO	Partnership for Observation of the Global Oceans
RCMRD	Regional Centre for Mapping of Resources for Development
RECOSCIX-WIO	Regional Co-operation in Scientific Information Exchange in the Western Indian Ocean
RIKZ	Rijksinstituut voor Kust en Zee (National Institute for Coastal and Marine Management -Netherlands)
ROOFS-AFRICA	Regional Ocean Observing and forecasting System for Africa
SADC	South African Development Community
SAISHC	Southern African Island States Hydrographic Commission
SEACAM	Secretariat for Coastal Area Management
SEACAMP	South-East Asian Centre for Atmospheric and Marine Prediction
SOEMEP	Science for Ocean Ecosystems and Marine Environmental Protection (IOC programme)
SOLAS	Surface Ocean – Lower Atmosphere Study (WCRP)
SST	Sea Surface Temperature
SWIO	South Western Indian Ocean
TAFIRI	Tanzania Fisheries Research Institute
TCMP	Tanzania Coastal Management Partnership
TEMA	Training, Education and Mutual Assistance in the Marine Sciences (IOC)
ToR (or TOR)	Terms of Reference
UDSM	University of Dar Es Salaam (Tanzania)
UEM	Universidade Edouardo Mondlane (Mozambique)
UNCED	UN Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UN/DOALOS	UN Division for Ocean Affairs and the Law of the Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme

UNFCCC	United Nations Framework Convention on Climate Change
URI-CRC	University of Rhode Island Coastal Resources Center
VLIZ	Flanders Marine Institute (Belgium)
VSAT	Very Small Aperture Terminal
WCRP	World Climate Research Programme (WMO-ICSU-IOC)
WDC	World Data Centre
WIO	Western Indian Ocean
WIOMAP	Western Indian Ocean Marine Applications Project
WIOMSA	Western Indian Ocean Marine Science Association
WMO	World Meteorological Organization
WOCE	World Ocean Circulation Experiment (WCRP)
WSSD	World Summit on Sustainable Development
WWF	World Wide Fund for Nature

In this Series *Languages*

Reports of Governing and Major Subsidiary Bodies, which was initiated at the beginning of 1984, the reports of the following meetings have already been issued:

1.	Eleventh Session of the Working Committee on international Oceanographic Data Exchange	E, F, S, R
2.	Seventeenth Session of the Executive Council	E , F, S, R,Ar
3.	Fourth Session of the Working Committee for Training, Education and Mutual Assistance	E, F, S, R
4.	Fifth Session of the Working Committee for the Global Investigation of Pollution in the Marine Environment	E, F, S, R
5.	First Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions	E, F, S
6.	Third Session of the *ad hoc* Task team to Study the Implications, for the Commission, of the UN Convention on the Law of the Sea and the New Ocean Regime	E, F, S, R
7.	First Session of the Programme Group on Ocean Processes and Climate	E, F, S, R
8.	Eighteenth Session of the Executive Council	E, F, S, R, Ar
9.	Thirteenth Session of the Assembly	E, F, S, R, Ar
10.	Tenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific	
11.	Nineteenth Session of the Executive Council, Paris, 1986	E, F, S, R, Ar
12.	Sixth Session of the IOC Scientific Committee for the Global Investigation of Pollution in the Marine Environment	E, F, S
13.	Twelfth Session of the IOC Working Committee on International Oceanographic Data Exchange	E, F, S, R
14.	Second Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions, Havana, 1986	E, F, S
15.	First Session of the IOC Regional Committee for the Central Eastern Atlantic, Praia, 1987	E, F, S
16.	Second Session of the IOC Programme Group on Ocean Processes and Climate	E, F, S
17.	Twentieth Session of the Executive Council, Paris, 1987	E, F, S, R, Ar
18.	Fourteenth Session of the Assembly, Paris, 1987	E, F, S, R, Ar
19.	Fifth Session of the IOC Regional Committee for the Southern Ocean	E, F, S, R
20.	Eleventh Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Beijing, 1987	E, F, S, R
21.	Second Session of the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Arusha, 1987	E, F
22.	Fourth Session of the IOC Regional Committee for the Western Pacific, Bangkok, 1987	E only
23.	Twenty-first Session of the Executive Council, Paris, 1988	E, F, S, R
24.	Twenty-second Session of the Executive Council, Paris, 1989	E, F, S, R
25.	Fifteenth Session of the Assembly, Paris, 1989	E, F, S, R
26.	Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1989	E, F, S, R
27.	Twelfth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Novosibirski, 1989	E, F, S, R
28.	Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, Caracas, 1989	E, S
29.	First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1990	E only
30.	Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1990	E only
31.	Twenty-third Session of the Executive Council, Paris, 1990	E, F, S, R
32.	Thirteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange, New York, 1990	E only
33.	Seventh Session of the IOC Committee for the Global Investigation of Pollution in the Marine Environment, Paris, 1991	E, F, S, R
34.	Fifth Session of the IOC Committee for Training, Education and Mutual Assistance in Marine Sciences, Paris, 1991	E, F, S, R
35.	Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1991	E, F, S, R
36.	Twenty-fourth Session of the Executive Council, Paris, 1991	E, F, S, R
37.	Sixteenth Session of the Assembly, Paris, 1991	E, F, S, R, Ar
38.	Thirteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Baja California, 1991	E, F, S, R
39.	Second Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992	E only
40.	Twenty-fifth Session of the Executive Council, Paris, 1992	E, F, S, R
41.	Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992	E, F, S, R
42.	Second Session of the IOC Regional Committee for the Central Eastern Atlantic, Lagos, 1990	E, F
43.	First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Investigation of Pollution in the Marine Environment, Paris, 1992	E, F, S, R
44.	First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms, Paris, 1992	E, F, S
45.	Fourteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange, Paris, 1992	E, F, S, R
46.	Third Session of the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Vascoas, 1992	E, F
47.	Second Session of the IOC Sub-Commission for the Western Pacific, Bangkok, 1993	E only
48.	Fourth Session of the IOC Sub-Cornmission for the Caribbean and Adjacent Regions, Veracruz, 1992	E, S
49.	Third Session of the IOC Regional Committee for the Central Eastern Atlantic, Dakar, 1993	E, F
50.	First Session of the IOC Committee for the Global Ocean Observing System, Paris, 1993	E, F, S, R
51.	Twenty-sixth Session of the Executive Council, Paris, 1993	E, F, S, R
52.	Seventeenth Session of the Assembly, Paris, 1993	E, F, S, R
53.	Fourteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Tokyo, 1993	E, F, S, R
54.	Second Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms, Paris, 1993	E, F, S
55.	Twenty-seventh Session of the Executive Council, Paris, 1994	E, F, S, R
56.	First Planning Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Melbourne, 1994	E, F, S, R
57.	Eighth Session of the IOC-UNEP-IMO Committee for the Global Investigation of Pollution in the Marine Environment, San José, Costa Rica, 1994	E, F, S
58.	Twenty-eighth Session of the Executive Council, Paris, 1995	E, F, S, R
59.	Eighteenth Session of the Assembly, Paris, 1995	E, F, S, R
60.	Second Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 1995	E, F, S, R

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61.	Third Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1995	E only
62.	Fifteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Papetee, 1995	E, F, S, R
63.	Third Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms, Paris, 1995	E, F, S
64.	Fifteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange	E, F, S, R
65.	Second Planning Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 1995	E only
66.	Third Session of the IOC Sub-Commission for the Western Pacific, Tokyo, 1996	E only
67.	Fifth Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions, Christ Church, 1995	E, S
68.	Intergovernmental Meeting on the IOC Black Sea Regional Programme in Marine Sciences and Services	E, R
69.	Fourth Session of the IOC Regional Committee for the Central Eastern Atlantic, Las Palmas, 1995	E, F, S
70.	Twenty-ninth Session of the Executive Council, Paris, 1996	E, F, S, R
71.	Sixth Session for the IOC Regional Committee for the Southern Ocean and the First Southern R Ocean Forum, Bremerhaven, 1996	E, F, S,
72.	IOC Black Sea Regional Committee, First Session, Varna, 1996	E, R
73.	IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Fourth Session, Mombasa, 1997	E, F
74.	Nineteenth Session of the Assembly, Paris, 1997	E, F, S, R
75.	Third Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 1997	E, F, S, R
76.	Thirtieth Session of the Executive Council, Paris, 1997	E, F, S, R
77.	Second Session of the IOC Regional Committee for the Central Indian Ocean, Goa, 1996	E only
78.	Sixteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Lima, 1997	E, F, S, R
79.	Thirty-first Session of the Executive Council, Paris, 1998	E, F, S, R
80.	Thirty-second Session of the Executive Council, Paris, 1999	E, F, S, R
81.	Second Session of the IOC Black Sea Regional Committee, Istanbul, 1999	E only
82.	Twentieth Session of the Assembly, Paris, 1999	E, F, S, R
83.	Fourth Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 1999	E, F, S, R
84.	Seventeenth Session of the International Coordination Group for the Tsunami Warning System in the Pacific, Seoul, 1999	E, F, S, R
85.	Fourth Session of the IOC Sub-Commission for the Western Pacific, Seoul, 1999	E only
86.	Thirty-third Session of the Executive Council, Paris, 2000	E, F, S, R
87.	Thirty-fourth Session of the Executive Council, Paris, 2001	E, F, S, R
88.	Extraordinary Session of the Executive Council, Paris, 2001	E, F, S, R
89.	Sixth Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions, San José, 1999	E only
90.	Twenty-first Session of the Assembly, Paris, 2002	E, F, S, R
91.	Thirty-fifth Session of the Executive Council, Paris, 2001	E, F, S, R
92.	Sixteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange, Lisbon, 2000	E, F, S, R
93.	Eighteenth Session of the International Coordination Group for the Tsunami Warning System in the Pacific, Cartagena, 2001	E, F, S, R
94.	Fifth Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 2001	E, F, S, R
95.	Seventh Session of the IOC Sub-commission for the Caribbean and Adjacent Regions (IOCARIBE), Mexico, 2002	E, S
96.	Fifth Session of the IOC Sub-Commission for the Western Pacific, Australia, 2002	E
97.	Thirty-sixth Session of the Executive Council, Paris, 2003	E, F, S, R
98.	Twenty-second Session of the Assembly, Paris, 2003	E, F, S, R
99.	Fifth Session of the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Kenya, 2002 (* Executive Summary available separately in E, F, S & R)	E*